

ABSTRACT

Title of Dissertation: AN INVESTIGATION OF STUDENTS'
EXPERIENCES WITH A WEB-BASED,
DATA-DRIVEN WRITING
ASSISTANCE ENVIRONMENT FOR
IMPROVING KOREAN EFL WRITERS'
ACCURACY WITH ENGLISH
GRAMMAR AND VOCABULARY

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Computer-assisted language learning (CALL) has played an increasingly important role in writing instruction and research. While research has been conducted on English as a second language (ESL) learners and the benefits of using web-based writing assistance programs in writing instruction, insufficient research has been done on English as a foreign language (EFL) students. This study is an empirical investigation of students' experiences with a web-based, data-driven writing assistance environment (*e4writing*) designed by the researcher to help Korean EFL writers with their grammar and vocabulary.

This study investigated Korean university students' perceived difficulties with English grammar and vocabulary as they wrote in English. It also explored their perceptions of *e4writing* as used in a writing course to enhance English grammar and vocabulary. This study investigated 12 participants' perceptions and "academic profiles" (learning styles, confidence, motivation, and other factors) when they were enrolled in a 16-week course called *Teaching Methods for English Composition*. To gain a more specific and personal view, the study also included detailed case studies of four of the study participants. The major sources of data for the analyses include interviews, reflective journals, questionnaires, samples of the students' writing before and after their use of *e4writing* and the researcher's reflective notes.

The study revealed that most of the students had difficulty with grammar and vocabulary in English writing. They positively perceived *e4writing*, as it provided individualized help on their problems with grammar and lexis. Overall, the students showed improvement in accuracy from the pretest to the posttest, and observations suggested that *e4writing* was probably related to this improvement; however, strong claims about *e4writing* as a cause of improvement cannot be made without a control group. The students felt *e4writing* was more beneficial for improving grammatical accuracy than for vocabulary accuracy. The students recommended that some features of *e4writing* be written in Korean to help students understand grammar and vocabulary explanations.

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KOREAN EFL WRITERS' ACCURACY WITH ENGLISH GRAMMAR AND
VOCABULARY

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CHAPTER 1

INTRODUCTION

The English language has been very important in the international community for many years. The necessity to communicate in English has become commonplace, for example, in education, business and politics. Moreover, the ability to write effectively in English is becoming increasingly important in our global community as a general method of communicating among nations. Writing is a complex process that demands cognitive analysis and linguistic synthesis, and achieving cognitive, academic, language proficiency is easily more challenging for English as a Foreign or Second Language (EFL/ESL) learners than for native speakers of English (Silva, 1993). As Reid (1997) suggested, all L2 writers, and especially those having challenges in accuracy, need additional linguistic instruction, careful analyses of their writing weaknesses by professionals in the field of teaching EFL, and consistent support and resources to improve their writing skills.

Regarding the issue of learning to write, the accuracy/fluency dichotomy has been debated in EFL/ESL research. As trends concerning communicative competence continue to focus on meaning rather than form, the goal of fluency in curriculum development can be better attained. Numerous researchers, such as Zamel (1987), have stressed both the need to emphasize writing in EFL/ESL classrooms as a process of discovery and that an overemphasis on grammatical and lexical errors can hinder this process.

On the other hand, Brumfit (1984) opined:

Further, writing, because it cannot be adjusted in response to the apparent incomprehension of the interlocutor, requires a more rigidly idealized linguistic

patterning. Thus whether we are dealing with native speakers or nonnative speakers, errors are unacceptable. (p. 85)

Previous studies on EFL writing (Cha, 2004; Cowan, Choi, & Kim, 2003; Granger & Tribble, 1998; Greaney, 1997; Hinkel, 2003; Hinkel, 2004; Hwang, 2006; Jung, 2006; Jung, Yang, & Yu, 2005; Leki, 1992) have argued that L2 students have particular difficulties with using correct grammar, spelling, and vocabulary. EFL/ESL writing teachers often confront the dilemma of having to decide how much time they need to spend on teaching accuracy in writing. However, since a student's difficulty with form will not automatically diminish over time, these teachers do not wish to neglect accuracy completely.

EFL/ESL researchers and teachers have continuously searched for new and better ways to help their students learn to write effectively and accurately. One area that has provided much excitement in recent years is the use of advanced technology that supports both synchronous and asynchronous communication. The growth of advanced technology in the teaching of composition has been seen in EFL/ESL writing classrooms, where a variety of computer software applications and other technological tools are can be used—for example, word processors, e-mail, listservs, online chats, bulletin board discussions and Web page projects.

Recently, computer-assisted language learning (CALL) has played an increasingly important role in writing instruction and research, and researchers of both native and non-native language learning have paid close attention to how computers have transformed the writing process in the classroom (New, 1999; Otlowski, 1998). The process approach to writing involves a collaborative effort instead of a private and

solitary act. Writing, in other words, is an activity that is typically performed for social, cooperative/collaborative, and constructivist¹ reasons. EFL/ESL instructors have integrated the CALL method into their writing instruction and teach the writing process through collaborative activities.

Statement of the Problem

A considerable amount of research has shown the importance of using ESL and EFL web sites in educational settings (Chen, 1988; Warschauer & Healey, 1998; Warschauer, 2000). Some studies have been carried out in order to determine the effectiveness of email for improving students' writing skills in the English language (Lee, 1998; Razak & Asmawi, 2004). Other studies have provided evidence that web-based linguistic exercises (Henry, 2007; Uzunboylu, 2005) are more effective learning mechanisms than more traditional, print-oriented ones (García & Arias, 2000), and other research has shown the benefits of a networked, computer-assisted classroom for ESL writers as compared to the traditional classroom in which oral exercises were the main focus of teaching (Sullivan & Pratt, 1996).

Much research has been done to outline the benefits of using computers or websites in writing instruction. However, by investigating differences among individuals (for example, language learning aptitude, short-term memory, and language acquisition and development), the needs of EFL/ESL writers and the success of CALL assistance programs, as well as other web-based writing assistance programs for EFL/ESL writers, can become clearer.

¹ A constructivist perspective holds that learners construct a coherent system of knowledge based on their interactions with the world as they attempt to understand of their experiences (Simon & Schifter, 1993).

Previous studies of web-based writing assistance programs have contributed to our understanding of the effectiveness of web-based writing programs for EFL/ESL writers (Choo & Kim, 2008; Cowan et al., 2003; Kuo, Wible, & Chou, 2001; Kuo et al., 2002; Wible, Kuo, Tsao, & Liu, 2001; Hegelheimer, 2006; Hegelheimer & Fisher, 2006). These studies suggest that web-based programs can help learners raise their lexico-syntactic awareness, so they can be better prepared to use writing techniques accurately, including being more accurate with grammar, spelling, and vocabulary. These studies also suggest that integrating web-based writing assistance programs with learner corpora can expose EFL/ESL writers to authentic target language input. In this way, their difficulties can be detected, their syntactic and lexical errors can be corrected, and more comprehensible output can be produced, this also increases the grammatical and lexical awareness of ESL writers.

Since little research has been conducted with Korean students, an empirical investigation of a web-based writing assistance program that provides Korean English writers with not just opportunities for interaction, but, more importantly, with individualized help based on their needs, may help Korean English learners overcome their lack of lexical and syntactic proficiency and, in turn, enhance their writing competency. Choo and Kim (2008), Cowan et al. (2003), Hegelheimer (2006), and Hegelheimer and Fisher (2006) included Korean ESL students in their research. Since ESL and EFL students obviously require different educational techniques, an examination of a web-based writing assistance environment, taking the needs of Korean EFL students' into consideration, may contribute to our understanding of the effect of this

writing environment on Korean EFL students and how best to handle their writing difficulties.

Purpose of the Study

The primary purpose of this study was to examine Korean EFL students' experiences with a web-based, data-driven writing assistance environment. More specifically, this study aimed to examine (a) 12 Korean EFL university students' perceptions of their lexico-syntactic difficulties with English writing (as a needs assessment for the writing assistance environment) and (b) their perceptions of and experiences with the writing assistance environment, which provided individualized help and opportunities for interaction. In addition, it provided "academic profiles" (learning styles, confidence, motivation, and other aspects) of all 12 student participants and offered more detailed results on a subset of four.

Research Questions

This study attempted to examine students' experiences with a web-based, data-driven writing assistance environment, *e4writing*, for enhancing Korean EFL university students' accuracy in English grammar and vocabulary. The research questions were classified into three categories: (1) students' academic profiles and needs analysis, (2) perceptions of *e4writing* and (3) assignments and test findings. The questions were as follows:

Students' Academic Profiles and Needs Analysis:

RQ1. What were the "academic profiles" of the Korean university EFL students, and did these profiles have anything in common?

RQ2. How did the Korean university EFL students perform on the pre-writing test?

RQ3. What did Korean EFL university students view as their grammar difficulties with English writing?

RQ4. What did Korean EFL university students view as their vocabulary difficulties with English writing?

Perceptions of *e4writing*:

RQ5. What were Korean university EFL students' early perceptions of *e4writing* as a tool to enhance their grammar and vocabulary accuracy in English writing?

RQ6. What were Korean university EFL students' later perceptions of *e4writing* as a tool to enhance their grammar and vocabulary accuracy in English writing?

RQ7. Which aspects of *e4writing* did Korean university EFL students think were the most helpful and why?

RQ8. Which aspects did Korean university EFL students think were the least helpful and why?

RQ9. What suggestions did Korean university EFL students have for improving *e4writing*?

Performance on Assignments and Tests:

RQ10. What were the effects of *e4writing* on the overall accuracy of Korean university EFL students' writing assignments?

RQ11. What were the effects of *e4writing* on the overall accuracy of Korean university EFL students' writing tests?

Significance

This study is an investigation of Korean university students' perceived difficulties with English grammar and vocabulary and of web-based resources for addressing those difficulties. Through research the benefits of CALL in writing have been supported, and subsequently, CALL is becoming increasingly common in EFL/ESL writing instruction. Therefore, EFL writers have the opportunity to use the technologically advanced features of computers or web-based writing assistance programs rather than using more traditional, print-based methods. This study attempted to foreground the voices of individual students about a web-based writing assistance environment designed for EFL writers who have difficulty with grammar and vocabulary. As mentioned above, this study provided "academic profiles" of all student participants, including their learning styles, confidence, motivation, and other factors, as well as highly detailed case studies for a subsample of four participants. These elements were intended to make this study qualitatively richer, and therefore possibly more explanatory, than many studies in the area of CALL.

Even though Korean EFL students did not work to improve their English writing skills so much in the past, English writing skills have recently become important in Korea. The Test of Written English (TWE) became a required component of the Test of English as a Foreign Language (TOEFL) in 2000. Additionally, many Korean universities have adapted TOEFL scores as a requirement for university admission and/or for graduation. As a result, current research efforts in this area focus on the writing ability of Korean students, in terms of assessing not only what they know, but, more importantly, what can be improved.

Several recent studies on CALL and writing support the idea that using computer technology with learner corpora can play a key role in supplementing grammar and lexical teaching (Chou, 2003; Cowan et al., 2003; Kuo et al., 2001; Kuo et al., 2002; Hegelheimer, 2006; Hegelheimer & Fisher, 2006; Milton, 1998; Wible et al., 2001). Innovative web and corpus-based writing assistance programs that provide language learners with the opportunity to interact may help Korean English learners use the language effectively, understand how to use the language in an authentic manner, enhance language learning potential, overcome a lack of lexical and syntactic proficiency and therefore, enhance their overall writing competence. This study will contribute to our understanding of Korean EFL university students' grammar and vocabulary difficulties with English writing and will assist us in determining the degree to which web-based resources can provide assistance for dealing with those difficulties.

Furthermore, for English teachers, tracking students' lexico-grammatical problems and finding resources to help eliminate students' persistent errors in writing are important. For EFL researchers, it is essential to track large amounts of learner output, to analyze the output and to attain knowledge about the source of the learners' difficulties. This study may help for a deeper understanding of a web-based, data-driven writing assistance environment as a potentially effective means to help EFL writers.

Limitations

This research has three areas of limitation in regard to its methodology, recruitment of participants, and interpretation of data. I address these separately below.

Concerning methodology, the findings obtained from these case studies were specific to the particular group studied and not to all EFL learners, as only a relatively

small number of participants within specific contexts has been taken into account. The results of this study need to be interpreted carefully considering the relatively small number of participants. The students were provided the offline instruction which mostly used the online essays from *e4writing*, and I could not control what students did outside of class to improve their writing. So, it is difficult to determine how much *e4writing* contributed to the actual improvement of accuracy in the students' writing. In addition, although the descriptive statistics on the assignments and tests show clear differences from the beginning to the end of the course, additional studies with a larger number of learners, possibly using an experimental design (treatment and control groups), are necessary to reach conclusive statistical results for the effectiveness of *e4writing* on accuracy in students' English writing. One approach for a later experimental study might be using a (a) control group with no special assistance, (b) a treatment group provided with only online assistance, and (c) another treatment group provided with both online assistance and offline instruction, to precisely measure the effectiveness of *e4writing*.

Recruitment of participants is a natural limitation. Participants self-selected to be members of this study. The study is an in-depth investigation of a class of students who enrolled in the Teaching Methods for English Composition course to meet the university requirement. Although participants are heterogeneous in terms of their levels of English proficiency, they share common traits such as the area of interest (English education), prior number of years of English classroom study (three years in junior high school and three years in high school) and nationality and language background (Korean). Since the 12 participants in this study had similar socio-cultural and educational backgrounds in relation to learning English, the generalizability of findings about their perceptions in

lexico-syntactic difficulties and in *e4writing* from this study thus may not always be applicable to students in other EFL situations where socio-cultural and educational backgrounds are different.

With respect to data interpretation, the study of human beings and their perceptions in a new environment is a complex issue, especially when a translation of the interviews and the reflective journals from Korean into English are involved. Since my own role was that of a participant observer and teacher throughout the 16-week period of the course, being totally unbiased towards the participants' behaviors was challenging. Data interpretation demands careful management, and if data are not dealt with carefully, the study would tell the story of the researcher instead of the story of the participants. Therefore, I used (a) peer debriefing with an experienced Korean teacher of English and (b) member-checking with the participants. These steps allowed me to represent the voices of the participants of my study.

Definitions of Key Terms

The following terms are used in the study:

Accuracy: Accuracy is the ability to be free from errors while using language to communicate (Wolf-Quintero, Inagaki, & Kim, 1998). The term “accuracy” relates to correct use of linguistic structures (grammatical accuracy), appropriate use of register (sociolinguistic accuracy), precision of vocabulary (semantic accuracy), and proper use of cohesive devices (rhetorical accuracy) (Omaggio, 1986). In this study, the term “accuracy” relates to grammatical and semantic accuracy.

CALL: Computer Assisted Language Learning refers to the use of a computer in the teaching or learning of a second or foreign language (Levy, 1997).

Concordancer: A concordancer is a program that allows the user to consider the context of a specific word by taking into account the words preceding and following it from a collection of texts (called a corpus) (Allan, 1999). The “keyword in context (KWIC)” presents multiple instances of the keyword, allowing textual patterns to be observed.

Cross-referencing helps provide students with examples, rules, and correct patterns.

EFL: A distinction has been made between EFL (English as a Foreign Language) and ESL (English as a Second Language). EFL learners are those in countries (such as Korea) where English is taught as a subject in schools but has no officially recognized status (Richards, Platt & Weber, 1985). ESL learners are those studying English in countries where English is used commonly and may have official recognition (e.g., Singapore).

Error: A distinction needs to be made between mistakes and errors. Brown (2000) defines a mistake as “a performance error that is either a random guess or a slip, in that it is a failure to utilize a known system correctly” (p. 217) and an error as “a noticeable deviation from the adult grammar of a native speaker” (p. 217). In as much as an error reflects the competence of the learner, an error committed by a second language student reveals, to a degree, his or her competence in the target language.

Error analysis: Error analysis is a term used in analyzing nonnative speakers’ deviations from native speaker norms in speech and writing. The Error Analysis approach holds that the learner’s errors provide significant information concerning how an L2 is learned and the state of the learner’s knowledge.

Error feedback: In this study, teacher feedback means feedback from a teacher in order to improve students’ grammatical and lexical accuracy. Error feedback consists of two types of corrective feedback. Direct feedback occurs when a teacher provides the correct form

for a student. Indirect feedback occurs when a teacher indicates the presence of an error but does not provide the correct form. This can be done by underlining errors, indicating the number of errors per line in the margin, or identifying the nature of errors using error code (Ferris & Roberts, 2001).

Fluency: In this study, the measure of fluency was the number of words written in a specific amount of time. Few studies actually separate the concepts of fluency and accuracy or measure fluency in any way other than a rate of production or the number of words produced in a given time (Chandler 2003).

Learner corpus: A corpus, which can include both written and transcribed spoken texts, is a large, principled collection of naturally occurring texts, stored in electronic form (Conrad, 2002). A computer learner corpus is “an electronic collection of authentic texts produced by foreign or second language learners” (Granger, 2003 p. 538).

Proficiency: The term “proficiency” is defined as a learner’s general language ability in speaking, listening, reading and/or writing based on some kind of criteria (Hadley, 2001).

Text: Text is a piece of language that is actually spoken or written for the purposes of communication. A stretch of language that is coherent and makes sense is a text rather than jumble of unconnected sentences (Bloor & Bloor, 1995).

TOEFL: The TOEFL (Test of English as a Foreign Language) is used to evaluate nonnative speakers’ proficiency in listening, speaking, reading and writing. The TOEFL is administered by Educational Testing Services (ETS) across the world.

TOEIC: The TOEIC (Test of English for International Communication) is an English language proficiency test for people whose native language is not English. It measures

the everyday English skills of people in a workplace context. As TOEFL, the TOEIC is administrated by ETS.

TWE: The Test of Written English (TWE), part of the TOEFL, is designed to give ESL/ EFL examinees an opportunity to show their ability to express ideas in acceptable written English. Examinees are required to write an essay (as part of the test) in 30 minutes time. A score ranging from 1 to 6 is assigned (ETS, 2004).

Writing process: The writing process is often associated with multiple stages of writing such as drafting, composing, revising, and editing (Zamel, 1983). Graves (1981) said that the writing process is “a series of operations leading to the solution of a problem; the process begins when a writer consciously or unconsciously starts a topic and is finished when the written piece is published” (p. 4).

Organization of the Chapters

This study aimed to explore Korean EFL college students’ perceptions of their lexico-syntactic difficulties with English writing, and their perceptions of *e4writing* designed to help them enhance their lexico-syntactic accuracy in English writing. This paper is divided into six chapters.

Chapter 1 provides (a) the introduction, (b) the statement of the problem, (c) the purposes of the study, (d) research questions, (e) the significance of the study, (f) the study’s limitations, (g) definitions of terms, and (h) the organization of the chapters.

Chapter 2 reviews relevant literature as follows : (a) Korean English writers’ difficulties and challenges with grammar and vocabulary, (b) the cognitive interactionist theory of language learning, and (c) CALL writing assistance programs.

Chapter 3 describes the research methodology employed in this study (a) the web-project development, (b) reiterating the research questions, (c) the overall research design, (d) the setting, (e) the participants, (f) the role of the researcher, (g) the treatment (h) the phase I (whole group), (i) the phase II (subsample case studies) and (j) trustworthiness. Each phrase delineates (a) the participants, (b) the instrumentation, (c) data collection procedures, and (d) data analysis procedures of this study.

Chapter 4 and 5 describe the results of each research question. In Chapter 4, the whole group findings are described as following: (a) students' academic profiles and needs analysis (research questions 1 through 4), (b) perceptions of *e4writing* for grammar and vocabulary accuracy (research questions 5 through 9) and (c) assignments and tests findings (research questions 10 and 11). In Chapter 5, the findings of four case studies are described as following: (a) needs analysis (research questions 1, 3 and 4), (b) perceptions of *e4writing* for grammar and vocabulary accuracy (research questions 5, 6 and 9) and (c) performance on assignments and tests (research questions 10 and 11).

Chapter 6 presents (a) discussion of the results, (b) pedagogical and pragmatic implications, (c) recommendations for further research, and (d) conclusions of this study.

Chapter Summary

This chapter introduced an overview of the research. CALL provides a detailed analysis of EFL/ESL students' writing weaknesses and provides additional linguistic instruction and resources to help EFL/ESL writers improve their writing skills. The purpose of this study was to investigate the grammatical and lexical challenges of Korean EFL university students in writing (as a needs assessment for the validation of the writing assistance environment), and their experiences with and perceptions about a new web-

based writing assistance environment designed to help them cope with their grammatical and lexical difficulties, but, in an attempt to offer more explanatory material, the study also provided “academic profiles” of the dozen participants and highly detailed case study results for a subsample of four. Altogether, 11 research questions were addressed to achieve the research aims.

This chapter also presented the significance of the above-described study. The study may contribute to the understanding of the web-based, data-driven writing assistance environment which provides language students with individualized help and the opportunity for interaction. It may help Korean English learners overcome their lack of lexical and syntactic proficiency and then enhance their writing competence. Lastly, this chapter addressed definitions of terms and the study’s possible limitations.

CHAPTER 2

LITERATURE RIVIEW

In Chapter 2, the following research areas are discussed: (a) Korean EFL writers' difficulties and challenges with grammar and vocabulary (b) cognitive interactionist theory as the theoretical framework for web-based writing assistance environments, and (c) CALL writing assistance programs.

Korean EFL Writers' Difficulties and Challenges in Grammar and Vocabulary

English language learners are required to write in English for personal and academic purposes, using appropriate vocabulary, grammar and Standard English writing conventions (Ferris, 1999; Ferris & Roberts, 2001; Leki, 1991; Truscott, 1996). For example, according to the Maryland State Department of Education (MSDE) writing standards, at the high-intermediate proficiency level, English language learners are required to write simple, compound and complex sentences in a variety of affirmative and negative patterns, using Standard English grammar and structure (MSDE, n.d.).

Furthermore, in order to pass the TOEFL, students must also pass a writing examination, the TWE. Passing the TWE means writing in a well organized and developed manner, using clear and appropriate details to support a thesis, displaying consistent knowledge in the use of language, and demonstrating syntactic variety and appropriate word choice.

However, second language writers at lower levels of proficiency often have difficulties with these skills and with accuracy in particular. For example, according to national, pre-K through 12 English language proficiency standards produced by the Teachers of Speakers of Other Languages (TESOL), at the third level (e.g., the developing level) of the five proficiency levels, students may have difficulties accurately

expressing their thoughts due to vocabulary and language structure limitations (Gottlieb, Carnuccio, Ernst-Slavit, Katz, & Snow, 2006).

Long (1983) strongly suggested that *focus on form*² may well be necessary for learners to achieve accuracy in their acquisition of a second or foreign language. Celce-Murcia (1991) has further suggested that for “young adults who are in college and at the high-intermediate proficiency level, some focus on form is essential if the teacher wants to help the students successfully complete their composition requirement” (p. 465).

However, a focus on form in writing has been long ignored in English language teaching in Korea. The primary reason for this is that requirements of the university entrance examination in Korea emphasize reading comprehension skills rather than writing. English writing in Korea has been usually included in exercise sections as a wrap-up activity, coming at the end of each unit of study. Writing exercise activities take the form of dictations, translations, and decontextualized activities. For this reason, Korean students struggle with accuracy. For example, Soh (1998) provided evidence that students had difficulties with linguistic accuracy in their compositions. 39 Korean EFL college students, 24 males and 15 females, in the department of Pre-Medicine were asked to complete a survey which consisted of 15 multiple choice questions and two open-ended questions. The result showed that 64.8% of the students indicated that vocabulary was the most difficult sub-skill in writing; 48.6% of the students responded that grammar was the most difficult.

In this section, the grammar and vocabulary difficulties of second language (L2) writers, mainly focusing on Korean EFL students, are described. In addition, some

² Ellis (2001) describes *focus on form* as “any planned or incidental instructional activity that is intended to induce language learners to pay attention to linguistic form” (Ellis, 2001, pp. 1–2).

responses to L2 writing and L1 interference are reviewed along with their linguistic challenges.

Difficulties with Grammar

A good command of grammar helps students present their ideas in ways that most effectively achieve their intended objective (Reid, 1997). Widdowson (1988) stated, “language learning is essentially grammar learning, and it is a mistake to suppose otherwise” (p. 154). Therefore, EFL students must not only acquire an understanding of basic grammatical rules to make their writing readable, but more importantly, they must develop advanced grammatical skills to write creatively and to convey complicated ideas accurately. For instance, according to Scarcella (2002), L2 learners need to know that conjunctions link clauses into sentences, cohesive devices can combine sentences into larger information units and conditionals are effective when analyzing scientific hypotheses. Learners should also have a command of modal verbs that enable the writer to express degrees of certainty, necessity and possibility.

While knowledge of grammar is essential for ESL/ELL writers to produce increasingly sophisticated, error-free sentence structures, the study of grammar itself and the correction of problematic sentence structures offer little in the way of sentence structure improvement. Leki (1992) argued that “after ten years of studying English in classrooms abroad, ESL students still may have trouble writing effectively in English and . . . students who can recite grammar rules, as many ESL students do quite well, are not always able to use those rules in producing language” (p. 23). Likewise, Greaney (1997) asserted that students who for years have studied English grammar and syntax

may lack “passive knowledge of such structures as relative clauses [and may] not automatically generate such structures in their writing” (p. 1).

One notable study on L2 writers was conducted by Hinkel (2004), who said that L2 students may have difficulty with the conventionalized uses of tenses and the passive voice in academic writing. She even found that a majority of advanced L2 students simply choose to avoid using such complex verb phrase constructions as passive voice, the perfect aspect, or predictive/hypothetical “would”.

In the Korean EFL context, many studies on students’ grammar difficulties with writing have been conducted by means of error analysis (Cha, 2004; Kim, 1998; Jung, Yang & Yu, 2005; Jung, 2006). Kim (1998) collected writing samples from 200 tenth grade Korean EFL students and reviewed a total of 2,258 sentences to investigate their grammatical errors. The participants, consisting of only male students, wrote an essay about themselves. A total of 2,122 errors were found, and the typical grammatical errors made by the students were determiners (25.4%), followed by awkward expression (14.3%) and incorrect verb complements (9.6%). In particular, article errors (65.7%) were the most common type of determiner errors. The students omitted indefinite articles (a/an), and/or definite articles (the) and/or misused indefinite and definite articles. The omission of the indefinite article amounted to a high percentage of the errors (55.9%). Some examples include:

* I am [] Chungang University high school student.

(I am a Chungang University high school student.)

A total of 211 errors were found related to verb complements. The students used incorrect verb complement forms as shown in the following example:

*I enjoy *to watch* TV. (I enjoy watching TV.)

At the college level, Cha (2004) examined 115 Korean EFL university students' essays (approximately 300 words in length each). A total of 1,330 sentence errors were identified for analysis from the students' essays by three native speaker teachers. Later, the researcher re-scored the errors and classified them in terms of linguistic features, and found that verbs (19.81%) and determiners (17.49%) were the most common error types in the writing samples. Specifically, the Korean EFL students made errors in verb forms (6.53%) and voice (5.4%) in the verb phrases:

*She liked *go* to shopping (verb form: She liked going to shopping.)

*I *was participated* in Paris. (voice: I participated in Paris.)

The omission (6.23%) of indefinite articles accounted for a very large percentage of the errors in determiners:

*She didn't have [] ideal man. (She didn't have an ideal man.)

The findings of this study are in agreement with those of Kim (1998). Indefinite article errors are the persistent error type found in Korean EFL students' writing at the high school and college levels.

More recently, Jung (2006) attempted to analyze argumentative writing essays written by 200 Korean EFL university students (81 males and 119 females) in order to explore grammatical errors in writing the English passive tense. The result showed that a total of 359 errors were made in various ways while attempting to form the passive sentence (732 sentences), that the most common problem was the formation of the "be" auxiliary verb (52.6%), and that there were a large number of tense errors related to the formation of the "be" auxiliary (20%):

*Personal computer *is* introduced in Korea about two years ago.

(Personal computer was introduced in Korea about two years ago.)

Jung (2006) noted that tense errors were a persistent error type found with Korean students. Lack of subject-verb agreement yielded the second most common error type (16.7%):

*Before long, if the measures *is* not taken against pollution, our

land may be turned into barren land in which nobody could live.

(Before long, if the measures are not taken against pollution, out

land may be turned into barren land in which nobody could live.)

Jung et al. (2005) examined errors in college students' English compositions, focusing on the use of tense and the subjunctive in order to provide teachers or text developers with basic materials for teaching grammar and writing. Thirty students participated in both the controlled and the free writing sessions in which students were asked to translate 32 Korean sentences into English and to describe their activities in the past, present, and future. The researcher counted the number of correct expressions of tense and the subjunctive in their essays to determine each subject's score, and two native speakers graded each essay using the TWE (TOEFL) standards. The results of the study showed that students used tense and subjunctive forms correctly 44.7% of the time in the controlled writing session while they used them correctly 90.9% of the time in the free writing session. Jung et al. (2005) suggested that this could be due to the fact that the free writing feature of this exercise itself allowed students to avoid the grammatical features or lexical items they felt difficulty using.

Students, as Kim (1998) pointed out, tend to avoid certain grammatical features or vocabulary they rarely use or do not understand. Therefore, the teacher, as Cha (2004) and Jung (2006) claim, should pay more attention to global errors³ than errors of the greatest frequency since “the frequency count does not necessarily reflect the degree of difficulty that students face” (Kim, 1998, p. 56), and to play the key part in keeping track of the persistent errors students make.

Difficulties with Vocabulary

Appropriate use of academic vocabulary is also an important component of writing for academic purposes. Lewis (1993) noted that vocabulary is the basis of language. Wilkins (1972) said that “Without grammar very little can be conveyed, without vocabulary nothing can be conveyed” (p.111). Academic vocabulary refers to the “high frequency words in academic writing” that “carry full lexical meaning” and provide the writer tools to describe complicated processes such as “linguistic acts” and “scientific activities” (Coxhead & Nation, 2001 p. 258). According to Salager-Meyer (1990), EFL/ESL students in an academic writing class need to use words for describing linguistic acts (for example, argue, claim, examine), words for describing scientific activities (such as analyze, survey, implementation) and words for describing subject matter in scientific activities (including current, change, decline, etc.) and many other words.

A case study by Granger and Tribble (1998), comparing the corpora of French EFL students and of native speakers explicitly points out the prominent phenomenon of

³ Burt and Kiparsky (1972) distinguish between global error and local error. A global error is one which involves “the overall structure of a sentence” (p.73) and thus hinders interactive communication, and a local error is one which affects “a particular constituent” (p.73) and does not prevent communication significantly.

overused adjectives by EFL learners. Hinkel (2003) described features of weak writing (commonly called vague, simple constructions) among L2 students, including the overuse of the “be copula” as the main verb, repeated use of vague nouns and frequent use of public (e.g., admit, agree) and private verbs (e.g., feel, hope, realize).

In the Korean EFL context, less research on difficulties with vocabulary in writing exists. Hwang (2006) investigated the over-passivization of English unaccusative verbs⁴ on a grammar-related, multiple-choice test, taken by 121 Korean EFL college students. The result showed that the lower the level of the Korean EFL students’ English proficiency, the more likely they tend to prefer the passive form, which leads to grammatical mistakes. For instance, students judged that the unaccusative form of change-type verbs (e.g., The weather changed a lot these days) was ungrammatical, and the passive form of happen-type verbs (e.g., The accident was happened by the two men) was grammatical. The study also found that the Korean EFL students had more difficulty with the use of change-type unaccusative verbs than happen-type verbs.

Likewise, Cowan et al. (2003) found that Korean learners of English had incorrectly used passive verbs by running a concordance software program on their learner corpus collected from 395 essays written by Korean students of English. For instance, they produced

*over the past decade the birthrate *was changed*

(over the past decade the birthrate has changed)

Jung (2006) and Kim (1998) found that the incorrect choice of lexical items was

⁴ Unaccusative verbs are generally understood to be intransitive verbs whose (surface) subjects are not actively responsible for the action of the verb. Examples of unaccusative verbs include verbs like *melt* and *happen*. English unaccusative verbs are categorized into two types: change-type verbs (e.g., change, grow, freeze, burn) and happen-type verbs (e.g., happen, appear, occur, result) (Hwang, 2006).

common in the Korean EFL learners' writing. The vocabulary errors were related to semantics since the sentences including the errors were grammatically well-formed: They wrote “**My sister comes and goes to Yonsei University.*” instead of “*My sister attends (or goes to) Yonsei University.*” (Kim, 1998); “**Especially, drinking the dangerous and poisonous water, man is injured fatally,*” instead of “*Especially, drinking the dangerous and poisonous water, man is harmed fatally*” (Jung, 2006).

Writing Challenges

This section will cover readers' responses to L2 writing and first language influence.

Readers' responses to L2 writing

According to Holliday (1994), what makes academic writing complex is its grammatical intricacy and lexical density. Studies exploring reader judgment of second/foreign language texts have shown that grammatical accuracy, vocabulary improvement and lexical selection in writing tasks are often emphasized by evaluators of student writing (Applebee, 1981; Blau, Galantai, & Sherwin, 1989; Engber, 1995; Santos, 1988; Silva, 1997). In supporting this, Engber (1995) found that the diversity of lexical choices and the correctness of lexical forms had a significant effect on reader judgment of the overall quality of essays written by L2 writers at the intermediate to high-intermediate proficiency levels. Likewise, Santos (1998) found that lexical errors were considered to be the most serious problem in two compositions, one written by a Chinese student and the other by a Korean student,

The focus on grammatical, or syntactic, and lexical errors has been an important issue in other studies as well (Applebee, 1981; Blau et al., 1989). Applebee (1981) noted

that EFL teachers consider mechanical errors, such as grammatical and lexical errors EFL writers often produce, as the most important evaluation criterion. In research examining the reaction of employment interviewers to the business writing of university L2 students, Blau et al. (1989) found that the interviewers were more sensitive to syntactic errors than to lexical errors.

Silva (1997) stated that ESL writers not only produced texts that were characterized by native speaker readers as “distinct from and often simpler and less effective” but also “planned and reread their writing less, wrote with more difficulty because of a lack of social resources, and exhibited less ability to revise intuitively by ear” (p. 215). Many researchers argue that these characteristics are due to interference from the writers’ first language (L1). First language interference in the L2 writing process is reviewed in the following section.

First language influence

Many studies for EFL/ESL students have already been conducted in the area of native language interference on the target language in the process of writing in English (Benson, 2002; Chan, 2004; Choi & Lee, 2006; Liu, Sung & Chien, 1998; Reid, 1997). Dulay, Burt, and Krashen (1982) defined interference as the “automatic transfer,” due to habit, of the surface structure of the L1 onto the surface of the L2. Ellis (1997, p. 51) referred to interference as “transfer”, which he says is “the influence that the learner’s L1 exerts over the acquisition of an L2”. He stated that the transfer is governed by the learners’ perceptions about what is transferable and by their stage of development in L2 learning.

When writing in the target language, EFL/ESL students tend to rely on their native language structures to produce a response. If the structures of the two languages are distinctly different, then one could expect a relatively high frequency of errors to occur in L2, thus indicating interference between the L1 and the L2 (Ellis, 1997). Beardsmore (1982) suggested that many of the difficulties EFL/ESL students have with the vocabulary and grammar of the L2 are due to the interference of habits from the L1. The formal elements of the L1 are used within the context of the L2, resulting in errors in the L2, as the structures of the languages, the L1 and the L2, are different. In learning the L2, learners construct their own interim rules with the use of their L1 knowledge, but only when they believe it will help them to learn the L2 task at hand or when they have become sufficiently proficient in the L2 for transfer of knowledge from the L1 to the L2 to be possible (Ellis, 1997).

Reid (1997) found that these errors provide evidence for the interference of the writers' first language. Chan (2004) investigated the relationship between students' L1 and EFL writing too. Chan examined English writing samples from 710 Hong Kong ESL college students and found, having investigated all five error types, that most errors were closely related to the subjects' L1. The data obtained from student interviews also confirmed that EFL students first called upon their L1 before producing their English essays.

Findings from Cowan et al. (2003), Hwang (2006), and Kim (1998) support L1 interference with L2 writing. Cowan et al. (2003) and Hwang (2006) found that the students' over-passivization of English unaccusative verbs stems from Korean verbs themselves that are equivalent to English unaccusatives that appear in L1 sentences with

passive morphemes. An example of L1 interference is following: “my hobby is impression of music (my hobby is listening to music)” (Kim, 1998). The Korean word “gamsang” meaning “enjoyment of its quality” was translated as its homonym, “impression”. As part of the data collection process in Kim’s (1998) study, the students were asked to prepare to write a self-introductory essay, by thinking about the essay at home and writing the essay in the classroom the following day. The students were free to use bilingual Korean-to-English and English-to-Korean dictionaries, if they so desired. However, the use of the dictionaries might lead them to translate L1 to L2 word-by-word, and, in turn, to L1 interference in their writing.

Chan (2004) argued that the use of the language transfer was even more obvious among learners at a lower English proficiency level. Along these same lines, Liu, Sung, and Chien (1998) concluded that the less English proficiency learners possess, the more L1 interference exists in their English essays. In Liu et al.’s (1998) study, the authors employed a think-aloud method to determine how Taiwanese EFL students wrote in English. The findings revealed that beginning EFL learners relied on their L1 to retrieve words more so than advanced EFL learners. More recently, Choi and Lee (2006) investigated nine Korean university EFL students’ use of their L1 in the L2 writing process using think-aloud protocols. They concluded that the lower proficiency group relied on the L1 for lexical searching and grammatical structures more so than the higher proficiency group.

Section Summary

L2 writers, in general, encounter grammar and vocabulary difficulties, and the weaknesses of Korean EFL students with grammar are seen in the following areas:

determiners, verbs, verb tense, subjunctives, the passive voice, the “be” auxiliary, and subject-verb agreement. Korean EFL students also use English unaccusative verbs where the passive should be used and utilize incorrect words. All in all, both grammatical and lexical errors, due to the interference of L1, are important to consider when responding to L2 writing.

Cognitive Interactionist Theory of Second Language Learning

Interactionist theories can be classified into two broad categories, namely, cognitive interactionist theory and social interactionist theory (Ellis, 1994). According to the cognitive interactionist theory, language acquisition is seen as a product of the complex interaction of the linguistic environment and the internal mechanisms of the learner. The underlying assumption of this theory is that input plays a determining role in language acquisition but only within the constraints imposed by the learner’s internal mechanisms. In contrast, the main premise of the social interactionist theory of Vygotsky (1978), as applied to language learning, is that social interaction is a mediator of learning and that interlanguage⁵ is formed by learners through interaction with more knowledgeable peers. Significant overlaps exist with regard to these two interactionist perspectives, and many cognitive interactionists perceive social interaction to be the mechanism by which mental restructuring occurs (Ellis, 1994). This study will focus on the cognitive interactionist perspective of second language acquisition (SLA) as a framework underpinning the application of computer-assisted language learning (CALL) writing assistance programs in EFL/ESL classrooms. Social interactionist perspectives

⁵ Interlanguage refers to “the separateness of a second language learners’ system that has a structurally intermediate status between the native and target languages” (Brown, 2000 p. 215).

are not the focus of this study. This section shows how L2 learners learn language based on the cognitive interactionist perspective.

The Cognitive Interactionist Theory of Language Acquisition, initiated by Krashen (1985) and Long (1985), emphasizes the importance of interaction in language learning and the necessity for learners to have access to meaningful and comprehensible input in interlanguage development. When learners engage in interaction with their interlocutors, they are compelled to negotiate meaning to arrive at a mutual understanding of comprehensible input, test hypotheses related to their developing interlanguage system and have access to feedback related to their output (Long, 1996; Swain & Lapkin, 1995). The different aspects related to the interactionist perspective are explained further in the following.

Comprehensible Input

Input refers to the target language to which the learner is exposed (by listening or reading). It has been hypothesized as the potential starting point for acquiring aspects of the L2. The Input Hypothesis advanced by Krashen (1985) states that in order for input to be available for acquisition, it must be comprehensible, taking into account a learner's particular stage of development. He asserted that if the input contains forms and structures just one stage beyond the learner's current level of competence in the language, then both comprehension and acquisition will occur.

Long (1985) built upon and extended the Input Hypothesis proposed by Krashen. While Krashen maintained that comprehensible input is all that is needed for language acquisition to happen, Long (1985) claimed that comprehensible input is necessary but not sufficient for language acquisition. The central issue concerning input specifically

relates to the form it needs to take for acquisition to occur and how much of the input can actually become “intake” i.e., comprehended language that holds potential for developing the learners’ linguistic system. Long (1985) argued that input shaped through interaction contributes directly and powerfully to acquisition.

Comprehensible Output

The role of output in L2 acquisition was proposed by Swain (1985), whose comprehensible output hypothesis stresses the crucial role of language production in L2 development. According to Swain, a learner promotes interlanguage development by focusing his or her attention on the linguistic features of the target language, and this helps learners to both internalize new forms (Pica, Holliday, Lewis, & Morgenthaler, 1989) and to improve the accuracy of their grammatical knowledge (Nobuyoshi & Ellis, 1993). Gass (1997) hypothesized that output, or the productive use of language, is a necessary part of language development. Direct or indirect feedback is also important in the comprehensible output hypothesis.

The role of Attention/ Noticing

The notion of attention is based on the Noticing Hypothesis by Schmidt (1983), which stated that noticing is necessary and beneficial for language learning. *Noticing* is of significant theoretical importance because it helps determine which input features become “intake.” Several researchers have examined the relationship between noticing and learning (Doughty, 1991; Schmidt & Frota, 1986; Sharwood-Smith, 1993).

Learners’ noticing of linguistic input plays an important role in making unfamiliar target language forms more familiar (Schmidt & Frota, 1986). A study by Sharwood-Smith (1993) showed that calling learners’ attention to certain linguistic forms proved

beneficial for language learning. This is because making linguistic features of the target language more prominent assists learners to comprehend the input. In addition, experimental research has shown that highlighting input in materials, in order to prompt learners to notice particular syntactic forms, positively influenced their acquisition (Doughty, 1991).

Schmidt said that “noticing requires of the learner a conscious apprehension and awareness of input” (2001, p. 26) and that conscious awareness is a necessary condition for language development (1990). Swain and Lapkin (1995) stated that the production of output contributes to “consciousness raising” as learners may notice a gap between what they want to say and what they can say. Noticing the gap can happen when learners focus on their own linguistic deficiency or problematic aspects in the target language (Gass, 1997).

Gass and Varonis (1989) noted that interaction serves to focus learners’ attention on form when there is some difficulty in communicating. In doing so, the learners’ level of awareness concerning their linguistic deficiency is raised, and this can restructure learners’ linguistic knowledge. Noticing a problem forces learners into a more syntactic processing mode that helps them to internalize new forms and improve the accuracy of their existing grammatical knowledge. The process of noticing can occur through triggers provided by others as well as through learners’ own reflection and monitoring.

Section Summary

Cognitive interactionist theory is the theoretical framework for web-based writing assistance programs in this study. From the cognitive interactionist theory, learners engage themselves by interacting within a linguistic environment, by negotiating

meaning, and by developing their interlanguage system through meaningful and comprehensive input. In addition, comprehensive output and noticing are emphasized as ways for improving conscious linguistic awareness. Based on this theoretical framework, the possibility for authentic interactions between L2 writers and computer technology is discussed in the next section.

CALL Writing Assistance Programs

Over the last two decades, a number of researchers have begun to examine the relationship of technology to L2 writing (Boswood, 1997; Levy, 1997; Warschauer & Healey, 1998). Although the word processor is still the primary tool for computer-aided writing, computer-assisted language learning, through various networking tools, such as e-mail, synchronous computer conferencing and web-based writing, has also been introduced into second/foreign language instruction (Warschauer, 1999).

In this section, I first focus on interactivity in CALL. Next, I discuss grammar and spelling check features of word processors and a potential element of CALL writing assistance programs (e.g., utilizing learner corpora), which can aid L2 writers in raising their grammatical and lexical awareness. Last, I critically review the most current web-based writing assistance programs that assist L2 learners' writing with a special emphasis on grammar and vocabulary.

Interactivity in Computer Assisted Language Learning (CALL)

CALL has changed the language learning environment and the dynamics within the language classroom. Language learning that takes place with the aid of computer networks has led to more social, interactive, collaborative, communicative and student-centered classrooms. CALL promotes student learning through use of the target language

in a functional way and provides students with a less threatening means of communicating (Beauvois, 1995; Warschauer, 1999). Taking a cognitive interactionist perspective, Chapelle (1998) claimed that CALL software can play an important role in providing learners with opportunities to facilitate second language acquisition (SLA). In particular, she suggested that multimedia CALL helps L2 learners comprehend semantic and syntactic aspects of linguistic input and receive opportunities to produce target language output, to notice their errors, and to correct their linguistic output.

One distinctive aspect of CALL is its interactive learning environment and the opportunities for authentic use of the target language (Chun, 1994). Chou (2003) argued that interactivity plays a crucial role in knowledge acquisition and the development of cognitive skills, and that educational assistance programs require higher degrees of interactivity in order to improve learning potential. According to cognitive interaction theory, learners are able to receive feedback on the linguistic output they produce so that they can attempt to use language to construct meaningful communication. Errors can also be viewed as the expression of a conflict between the learner's interlanguage and the correct use of the target language. Providing written feedback on errors is considered to be an important tool for the learners' understanding.

Researchers consider both grammar and word correction to be important feedback in L2 writing courses (Bitchener, Young, & Cameron, 2005; Chandler, 2003, Conrad & Goldstein, 1999; Ferris, 1999; Ferris & Roberts, 2001; Robb, Ross, & Shortreed, 1986). ESL writing instructors often confront the dilemma of deciding how much to emphasize structural and mechanical correction over the content and organization of writing (Vann, Meyer, & Lorenz, 1984), and over the past decade,

considerable attention has been given to the treatment of errors in the written work of L2 learners. Swain (1985) claimed that the learner's production of modified output is necessary for second language mastery and that useful and consistent feedback from teachers and peers can help create a sufficient number of opportunities to produce modified output.

However, there has been much recent debate about the value of providing error feedback on L2 writing since Truscott (1996) claimed that grammar correction has not only ineffective but harmful effects on L2 writing and should be abandoned in L2 writing class. More recently, Truscott claimed that correction does not help students improve in accuracy (2008, 2010) and argued that if there is any benefit to grammar correction it is "so small as to be uninteresting (p. 256)".

In contrast to Truscott's argument (1996, 2007, 2008, 2010), many researchers claimed that error correction had a positive effect on reducing language errors (Chandler, 2003; Ferris, 1999, Ferris & Roberts, 2001), and improving accuracy in language use (Chandler, 2003; Ferris & Helt, 2000). Ferris (1999) and Ferris and Roberts (2001) argued that students themselves want to receive error feedback from their teachers and that this error feedback is helpful to L2 writers in improving their accuracy and overall writing quality. Ferris and Helt (2000) found that students who maintained error logs improved the accuracy of their writing over the course of a semester more than those who did not. Chandler (2003) analyzed the improvements in writing for two groups of students—both were given the same error feedback on their written work. Chandler discovered that "the accuracy of student writing over 10 weeks improved significantly

more if these ... college students were required to correct their errors than if they were not (p.279)".

Specifically, Ferris and Roberts (2001) claimed that the method teachers use to give feedback on written errors is important for maintaining students' interest and motivation. Robb et al. (1986) found that direct feedback was not effective for treating surface errors and they suggested that less time-consuming methods of directing students' attention to surface errors may be sufficient. Ferris and Roberts (2001) stated that indirect feedback, such as highlighting errors, helps students to improve their accuracy over time and that this is a more effective way to correct errors than direct feedback.

Although little research has been done on the role of feedback in CALL, CALL allows feedback to be presented the learner (Nakata, 1993; Robinson, 1991). The view of feedback as a tool within the L2 processes contributes much to our understanding of the role that computer programs can play in L2 learning environments. Computers, allowing one to analyze free text, to detect errors, to diagnose them and to provide feedback on them, might be a great help to L2 writers. Although direct feedback from the teacher is the most popular form of feedback for students (Chandler, 2003) as it is the fastest and easiest way for them to revise their writing, it can be the most time-consuming method for the teacher. Indirect feedback, just indicating that an error has been made (e.g., underlining feedback on errors), can be the overall easiest way for the teacher to respond to the student when multiple drafts are involved. CALL programs may help in relieving teachers' burden to provide students with either direct or indirect feedback on those errors and, at the same time, provide students with more detailed feedback on writing assignments (Chen, 1997).

Grammar and Spell Check Features

Word-processing software is generally available in most languages, at least as far as the fonts for the writing system are concerned so that texts can be composed (MacArthur, 1999). A word processor has a thesaurus, and spelling and grammar checking features. The spell check feature of some word processing programs (e.g., Microsoft Word) automatically detects and corrects commonly misspelled words, grammar errors, and capitalization errors while a writer types (Habraken, 2003). The spelling and grammar check features help writers watch closely for potential errors and offer immediate, proposed corrections (Bolt, 1992; Rimrott & Heift, 2008). Spelling check features rely on a word list, which is not the same as a dictionary, which simply lists all the words, including their inflections, without distinguishing different word senses, as well as rules (or at least heuristics) for calculating the proposed corrections when a word is not found in the dictionary (Rimrott & Heift, 2008). Grammar checking, which monitors syntax, sentence structure, punctuation and capitalization, most typically, successfully identifies grammatical inappropriateness (MacArthur, 1999).

In Gupta's study (1998), the word processor spelling check feature benefited those students whose initial writing ability was poor and whose previous writing instruction lacked an emphasis on writing mechanics. Similar findings have been found by Owston and Wideman (1997), whose research, over a three-year period, revealed a significant improvement in the writing quality of students who had computer access. More recently, Figueredo and Varnhagen (2006) investigated the effectiveness of spelling and grammar check features on revising the content of writing. Sixty-five students revised two essays on a computer, one with the spelling and grammar check

features, and the other with a dictionary. The results showed that computers helped the participants to revise their texts for surface errors to a greater degree of accuracy than the dictionary did, and this confirms the usefulness of these tools for writing.

Although the spelling and grammar check features flag errors and suggest corrections, these features contain limitations. The spelling check feature fails to flag misspelled words that are meant to mean something different from what the checking feature has interpreted, and even though the checking feature notes these words as errors, in fact these words may not contain errors at all. These false error alerts may take place, for example, when homonyms (e.g., *back* for *bake* or *whet* for *went*) are considered (MacArthur, 1999). The spelling check feature also fails to propose the correct spelling for many words, especially severely misspelled words. In addition, the grammar check feature often does not catch serious grammatical and mechanical errors (MacArthur, 1999). Consequently, these word processor features are limited in their capacity to assist L2 writers in correcting their lexical and syntactic errors and thus, their knowledge of spelling and grammar. Recently, the field of computer learner corpora has addressed the weaknesses of the spelling and grammar check features.

Learner Corpora

In the opinion of interactionists, the use of learner texts helps L2 writers to focus their attention on linguistic features of the target language and to increase their grammatical and lexical consciousness. Hence, CALL writing assistance programs can provide L2 writers with potential advantages in that they utilize a learner corpus to enable them to easily detect their linguistic difficulties and to increase their syntactic and lexical awareness.

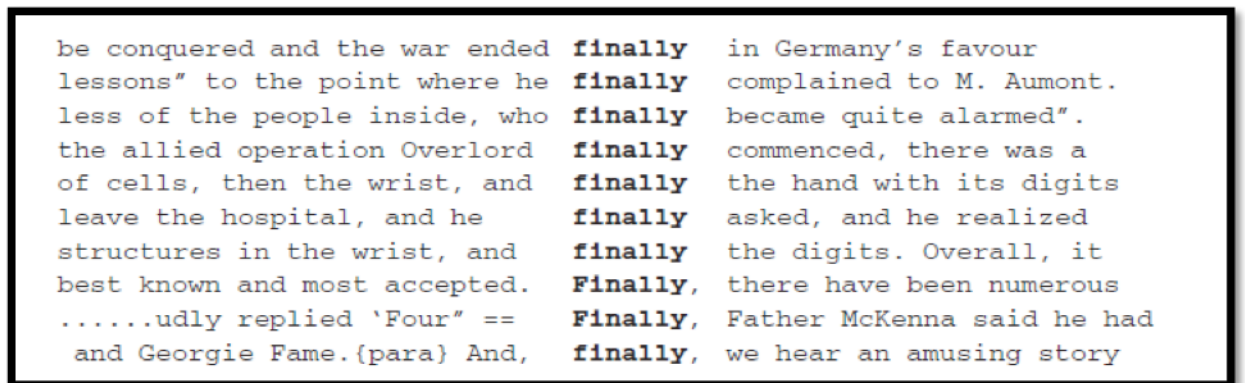
In recent years, various kinds of corpora have been compiled throughout the world, and learner corpus research has become increasingly popular. Most existing learner corpora are corpora of learner English that focus on the learners' written language and contain data from learners from one L1 group. These learner corpora include, for the most part, general essays or academic texts written primarily by foreign learners whose first languages are either European or Asian languages (Nessefhauf, 2004).

Learner corpora rely on computer-assisted techniques in order to handle the large amount of data in a corpus so that the data can easily and more widely be distributed for researchers to compare and verify results (Conrad, 2002). By way of computer-assisted techniques, the influence of various factors on the learner's language can be systematically analyzed, and any aspect of the learner's language can then be investigated, including the learner's L1, the learner's proficiency level of English, the text type, the student's age and sex, the student's total years of learning or acquisition of English and the learning environment in which the language was learned or acquired. Another advantage of learner corpora is that the data they contain are non-experimental. Researchers concerned with the patterns in language can empirically analyze learners' real production based on what is observed.

Moreover, knowing what native speakers typically say/write and their typical difficulties of a certain language are important to learning. In the middle of the twentieth century, the Contrastive Analysis Hypotheses (CAH) showed that we can predict and describe the patterns that will cause difficulties with learning (Brown, 2000). However, critics have asserted that comparing the learners' L1 with the target language is not enough to identify these areas of difficulty. Learner corpora help identify these areas of

difficulties by analyzing the language produced by a certain group of learners and comparing it with the language produced by native speakers. Gilquin, Granger and Paguot (2007) analyzed learner corpus data and in doing so, discovered a number of problems which non-native learners experience when writing academic essays (e.g., lack of register awareness, phraseological infelicities, and semantic misuse).

More importantly, computer learner corpus enhances the users' language awareness (Allan, 1999; Dagneaus, Denness & Granger, 1998; Tsui, 2004; Tsui, 2005). One notable example of such a corpus is TeleNex, a website for English language teachers in Hong Kong that includes *TeleCorpora* and TeleGram. *TeleCorpora* consist of a corpus of modern English and a learner corpus of written English from primary and secondary English students (see Figure 2.1). TeleGram explains common mistakes by Chinese learners of English.



be conquered and the war ended	finally	in Germany's favour
lessons" to the point where he	finally	complained to M. Aumont.
less of the people inside, who	finally	became quite alarmed".
the allied operation Overlord	finally	commenced, there was a
of cells, then the wrist, and	finally	the hand with its digits
leave the hospital, and he	finally	asked, and he realized
structures in the wrist, and	finally	the digits. Overall, it
best known and most accepted.	Finally,	there have been numerous
.....udly replied 'Four" ==	Finally,	Father McKenna said he had
and Georgie Fame.{para} And,	finally,	we hear an amusing story

Figure 2.1. Concordance results for "Finally" in the *TeleCorpora* (Tsui, 2005).

Tsui (2004) analyzed over 1,000 grammar questions asked by English language teachers in Hong Kong who had difficulties explaining different English grammar usage. She concluded that computer learner corpora allow teachers to check prescribed grammar rules against linguistic corpora data and aids them in becoming aware of features and patterns that emerge from the data. Allan (1999) found that corpus programs help

teachers enhance their understanding and mastery of English by focusing on the prominent features and patterns. The growing awareness of how different forms are distributed in various texts assists users in developing confidence to make informed decisions when deciding what to teach and how much time should be assigned to a given lexical item or to grammatical structures (Allan, 1999).

The process of using a corpus is beneficial not only to teachers but also to the learners of languages because it can help users notice linguistic patterns and pragmatic features that they were not aware of previously. As Dagneaus et al. (1998) stated, language learners first need to have access to comprehensive catalogues of authentic learner errors and their respective frequencies.

Dagneaus et al. (1998) examined 75,000 words of essays written by French-speaking university students to establish guidelines for an EFL grammar and style checking mechanism, especially designed for French-speaking students. In critically evaluating the corpus for errors, the researchers found that the students had grammatical difficulties with articles, verbs and pronouns from the error-tagged corpus. The researchers suggested that L2 writers can benefit from error-tagged learner corpora in their efforts to increase their language awareness and to discover key features of learner writing, in particular, areas of persistent difficulty. Likewise, Cowan et al. (2003) and Kuo et al. (2002) said that the learner corpus can be useful in not only detecting the persistent lexical and grammatical problems of L2 writers but also in providing them with appropriate solutions and feedback. How learner corpora are integrated into web-based writing programs is discussed below.

Web-based Writing Programs for EFL/ESL

Even though few studies have examined the more recently developed, web-based writing programs (Lam, 2000; Warschauer, 1999), some tools have been designed to help students. *CommonSpace* (<http://www.sixthfloor.com>), for instance, is a writing software package by Sixth Floor, allowing two or more people to work together easily in creating and/or revising an electronic document and to comment on each other's writing with the aid of a spell checking feature, an online handbook for grammar, mechanics, and documentation, and online help (Hernandez et al., 2006).

With this software, attaching one or more columns of annotations to original documents is a simple process, and therefore, teachers and co-workers can use it to their advantage. Each annotation can be linked to a specific part of the original document, or to a second (edited) copy of the original document. Columns can be created as either "linked" or "unlinked." A linked column is associated with another column, of any sort, and all annotations made in the linked column refer to specific words in the other column. In this way, the draft of a text can be annotated. Columns can be given names, which proves useful for collaboration and file merging.

A typical use of *CommonSpace* was demonstrated by Foreman (1998), who studied a professor and 22 students in a distance writing course working together on research papers. An essay written by one student was passed on to the professor in the *CommonSpace* format, and the professor added his comments into a separate, linked column. The files were then passed back to the originator of the text, who used the "file merge" function to bring the various annotation columns together into a single file. The individual user could easily compare and see the variants between the texts in a separate

column at any time during the writing process (see Figure 2.2). Finally, this new file was copied and sent to each participant so that they could maintain a complete, archived record of the entire writing process.

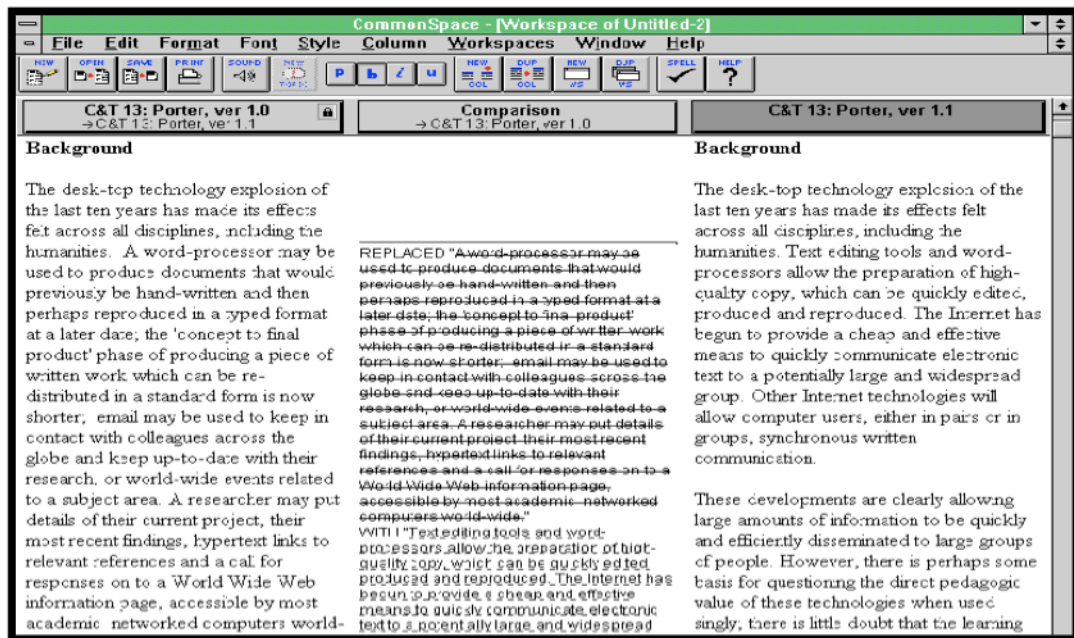


Figure 2.2. Using *CommonSpace* to compare the drafts of an article.

CommonSpace provides features that encourage users' collaboration and allows users to insert sound comments and to add hyperlinks to files. Students can use these features for group collaborative work, for the collation and evaluation of responses to texts, or for independent study. Additionally, *CommonSpace* includes conferencing software using standard Internet protocols. Conference call participant comments about a text (during a call) are automatically "threaded" to help maintain the overall flow of the call and are displayed synchronously to each connected participant. Disadvantages of *CommonSpace* are that the software must be installed in each user's computer and that the software is expensive.

Similarly, Daedalus Integrated Writing Environment (*DIWE*) offers a suite of collaborative writing tools, designed to run on a local area network (<http://www.daedalus.com>) and online (*DIWE* Online <http://www.daedalusonline.com>) (The Daedalus Group, Inc., 2003). *DIWE* helps students develop skills in writing and critical thinking and provides real-time, computer-mediated communication⁶. *DIWE* emphasizes the writing process (Baughan, 1995) and enables users to explore their writing topics before writing, to use formatting and spelling checking features during writing, to revise/edit through peers' feedback and to publish their final output. Further, *DIWE* consists of a "real-time" conferencing program to support collaborative activities, such as during the revision stage of the writing process, and to foster collaborative communication among learners and writers through "Mail" or a "Discussion Board" (*DIWE* Online). *DIWE*'s database of learner texts (See Figure 2.3) displays a writer's draft and guides a reviewer through a series of feedback prompts to generate effective feedback. *DIWE* gives students the opportunity to submit electronic files and to read the final result of their collaboration.

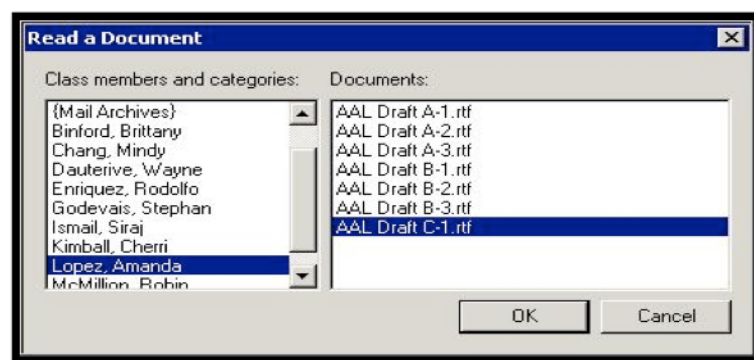


Figure 2.3. Database of learner texts in *DIWE*.

⁶ Computer-Mediated Communication (CMC) refers to computer applications that facilitate communication. Examples include e-mail, Internet conferencing, and discussion boards, and online chat rooms.

DIWE has been used at over 600 high schools, colleges and universities in the United States, France, Greece, Japan, Taiwan, Hong Kong and the Middle Eastern (Butler, 2006). *DIWE* is widely used in foreign language (FL) classrooms, since it has the feature of spell checking in various languages (Spanish, French and German) and a thesaurus. *DIWE* is ideal for EFL/ESL classes because it includes a unique concordance feature (The Daedalus Group, Inc., 2003) and although this function does not correct grammar and spelling mistakes, it creates a summary of the student's writing, noting the frequency of every word used, listing the number of parts of speech and giving a summary of each paragraph as shown in the example below (see Figure 2.4).

Frequency List	
12	the
7	and
9	a
9	of
6	to
Statistics	
Characters.....	839
Words.....	178
Unique Words.....	79
Sentences.....	6
Questions.....	0
Exclamations.....	0
Paragraphs.....	1
Characters per word.....	4.99
Words per sentence.....	28.60
Words per paragraph.....	151.00
Sentences per paragraph.....	5.00
Unique/Total ratio.....	0.47
Gunning Fog Index.....	22.65
"To Be" Verbs.....	5 (3%)
Relative Pronouns.....	1 (1%)
Personal Pronouns.....	6 (3%)
Prepositions.....	22 (14%)
Coordinating Conjunctions.....	12 (8%)
Possibly Vague Terms.....	3 (2%)

Figure 2.4. A concordance result in *DIWE*.

For ESL/ EFL writers, the concordance feature allows the users to try out new sentences, to experiment with different ways of phrasing, to move large (or small) sections of the text easily and to consider a variety of alternatives when drafting and revising.

Carlson (1996) investigated a link between *DIWE* and increasing levels of linguistic sophistication in 17 deaf college ESL students who lost their hearing early in life and therefore had little exposure to English. The students were asked to work on *DIWE* one to two days per week during their regular English classroom hours. The initial and the final writing samples were collected and scored using the TWE Scoring Guide (ETS, 2004). The students were tested before and after writing using the RTAS, Revised Test of the Ability to Subordinate, which is a 45-item pencil-and-pen test containing nine syntactic structures of English (pronominal adjectives, adverbs, prepositional phrases, infinitive phrases, participial phrases, gerund phrases, adverbial clauses, relative clauses and noun clauses). The test results comparing the average initial essay scores and the final essay scores showed an increase in the ability of the students to use appropriate syntax and lexical items. A comparison of the RTAS pretest results and the posttest results revealed an overall increase in the proper use of the nine structures of English.

Even though *DIWE* was designed to guide the students through the essay planning process, *DIWE* does not diagnose and correct learner errors, and it does not provide guidance to EFL/ESL writers in identifying words and structure patterns that are most problematic for them. Resembling CommonSpace, *DIWE* software is also expensive and requires an installation for all users.

Web-based writing assistance programs with a concordance feature have started to appear on the market as well (Nesselhauf, 2004). From the cognitive point of view, the meaningful use of a learner's linguistic resources assists interlanguage development by focusing learner's attention on linguistic features of the target language. Hence, learner

corpora can help learners to internalize new forms correctly (Pica et al., 1989) and to improve the accuracy of their grammatical knowledge (Nobuyoshi & Ellis, 1993).

Milton (1998) integrated learner corpora into a writing system. The writing system included an error recognition exercise that was designed to make learners more aware of their most common and serious errors. In this writing system, each error was linked to an online hypertext grammar tool so that the learner could request a full explanation of the lexical or grammatical error made, and the feedback as set up in such a way that the learner as encouraged to consult the online grammar tool as he or she worked with the system. The hypertext system user, through corpora of the writing of native speakers of English and L2 learners, could quickly access related problems and practice recognition of correct and incorrect language patterns utilized by native English writers and by non-native English writers. Furthermore, the concordance feature of this program informed the user of the frequency of selected expressions in the text and in the particular text being reviewed.

CALL should be designed with both the content and the learners in mind to meet the unique needs of ESL learners (Hegelheimer, 2006; Hegelheimer & Fisher, 2006; Kuo et al, 2001; Kuo et al, 2002; Wible et al., 2001). Writing assistance programs, formulated to meet the specific needs of EFL/ESL writers, improve the accuracy of their writing. These programs include: *ESL Tutor* (Choo & Kim, 2008; Cowan et al., 2003), Intelligent Web-based Interactive Language Learning (*IWiLL*) (Kuo et al., 2001; Kuo et al., 2002; Wible et al., 2001) and the internet-based Writing Resource for the Innovative Teaching of English (*iWRITE*) (Hegelheimer, 2006; Hegelheimer & Fisher, 2006). All these programs are fundamentally based on the learner corpus concept and have the shared goal

of uncovering the particular learners' needs. In addition, these programs support the interaction between the learner and the computer through the use of tracking technology, which enables users (e.g., learners, teachers and researchers) to monitor and track their information and encourages teachers to develop classroom materials, such as interactive, student writing activities (Hegelheimer & Fisher, 2006). The *ESL Tutor* connected to a web-enabled database, for instance, is capable of automatically recording all data, including the time it takes for users to complete a task, the answers they choose and the feedback they receive (Choo & Kim, 2008).

The *ESL Tutor* (Cowan et al., 2003) is a platform for investigating whether or not errors consistently made by Korean learners of English can be eliminated. Cowan et al. (2003) began to spot-check 395 essays of Korean students in ESL courses at the University of Illinois. They used a concordance software program (Concordance 3.0) to determine the frequency of the kinds of errors within a given syntactic category. On the basis of the data obtained, they designed and implemented the *ESL Tutor*, which draws students' attention to one or more grammatical errors discovered in the students' essays (e.g., overpassivization of unaccusatives) and provides practice. The *ESL Tutor* offers explanations of L1 (i.e., Korean) based errors and the opportunity to identify errors with different types of feedback (See Figure 2.5). For instance, a user receives "Wrong" and "Try again" notifications when he or she fails to identify errors correctly and metalinguistic feedback for his or her correct identification of errors.

Cowan et al. (2003) also examined the effectiveness of the *ESL Tutor* in improving the writing performance of 22 Korean ESL students. They concluded that the *ESL Tutor* might help students to correct persistent errors, and those errors which are

lexically determined, such as unaccusative verbs, might actually be easier to correct. Although the study of Cowan et al. (2003) had a methodological problem of testing the Korean students with the same passage in the pre- and posttest, this empirical study suggested that the more emphasis the program places on making Korean students aware of their errors, the more grammar awareness the students would potentially have. Choo and Kim (2008) supported the findings in Cowan et al. (2003). They investigated whether or not the *ESL Tutor* could help 22 Korean ESL learners eliminate certain L1 transfer errors, including overpassivization, misuse of indefinite articles and missing plural markers. They concluded that the *ESL Tutor* was effective in handling these problems.

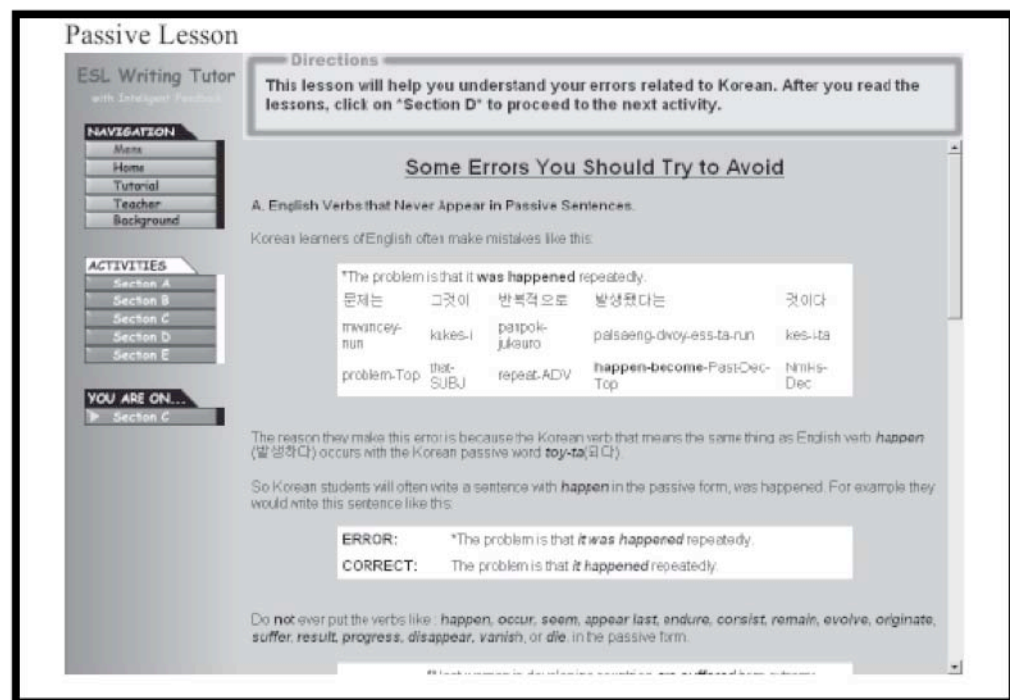


Figure 2.5. An explanation of over-passivization errors in the *ESL Tutor*.

As Cowan et al. (2003) suggested, follow-up tests over a period of time are needed to determine if persistent errors can be eliminated. Choo and Kim (2008) tested 33 Korean ESL students on the long-term effectiveness of the *ESL Tutor* and found no

significant relationship between time spent on the *ESL Tutor* and improvement shown on posttests, as compared to pretests, concerning the passive voice, articles, quantifiers and demonstratives.

Technically, the *ESL Tutor* has limited functions. It needs to provide learners with the opportunity to produce target language output in full sentences with context within the system. More importantly, Chapelle (1998) proposed that CALL offers environments in which learners are capable of producing output, and Hinkel (2004) argued that L2 writers need individualized help with both sentence-level syntax and explicit grammar instruction. In addition, Vygotsky's developmental concept suggests that teachers need to design environments in which L2 writers are provided with individualized feedback from peers, tutors or teachers. Considering these claims, writing tools need to give L2 writers opportunities to generate output and receive feedback through writing, revising, and editing texts.

IWiLL (Kuo et al, 2001; Kuo et al, 2002; Wible et al, 2001) complements the weaknesses of the *ESL Tutor*. This program is an interactive, corpus-driven, web-based writing environment that attempts to simultaneously address a variety of particular needs: (a) the need for learners to be exposed to natural and authentic target language input, to receive comprehensible feedback on their writing, and to use the language communicatively, (b) the need for teachers to provide students with appropriate input and comprehensible feedback and to identify error patterns in the learners' writing, and (c) the need for researchers to track large of amounts of learner output in order to analyze this output data and to attain knowledge about the learners' difficulties.

For instance, while learners write their essays, teachers can simultaneously create

teaching materials, or teachers can correct learners' essays and provide feedback, and researchers can research learners' common errors on the corrected essays (see Figure 2.6). Through the resulting corpus of the learners' essays, teachers can see how well students have mastered a particular expression. Teachers can develop teaching materials based on the errors displayed as search results from the corpus, for example, in order to draw learners' attention to errors and eventually raise their language awareness. Thus, the teachers and students interact asynchronously and synchronously to notice errors and correct them. All in all, the tracking technology promotes interaction between the user and the computer, and the resulting collection of data can be used to generate learning performance indices to measure the progress of each individual learner.

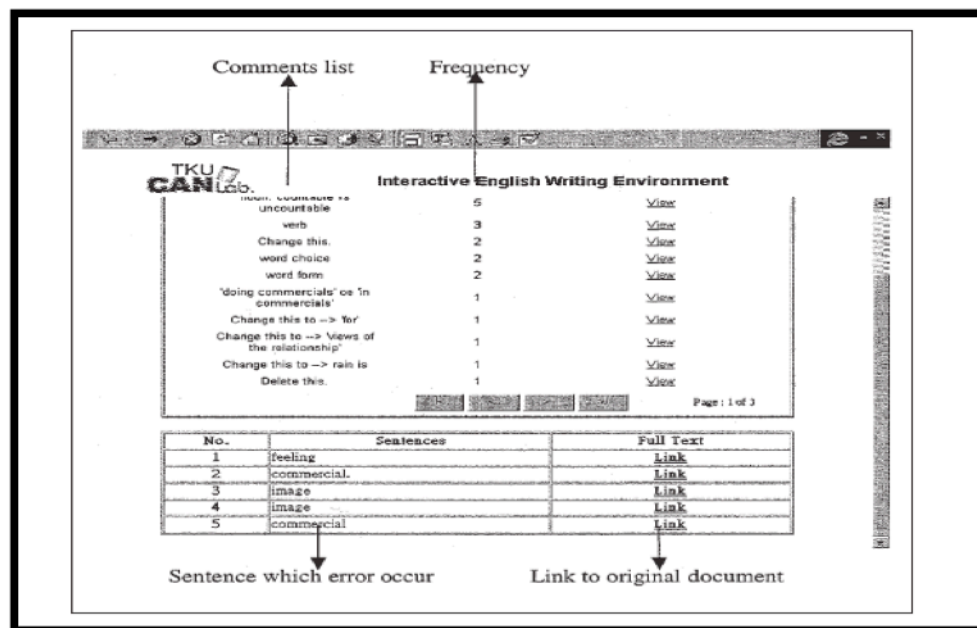


Figure 2.6. Search result of errors in *IEWiLL*.

IEWiLL is an effective tool used to help L2 writers' with their persistent errors and with teachers' feedback in the writing process. *IEWiLL* also has links to online resources for the benefit of L2 writers. As Swain and Lapkin (1995) stated, their production in

writing contributes to “consciousness raising” as they may notice a gap between what they want to say and what they can say. Indeed, *IWiLLs*’ interaction functionality serves to better focus learners’ attention to form and helps to raise the learners’ level of awareness of their linguistic deficiencies (Gass & Varonis, 1989).

However, as *IWiLL* relies on human resources, including teachers, tutors, and peers, if those individuals have a limited ability to explain error problems to the students, L2 writers may fail to understand the explanation (Truscott, 1996) and might not benefit from *IWiLL* to the fullest extent possible.

iWRITE (Hegelheimer, 2006, Hegelheimer & Fisher, 2006) offers an expanded version of the *ESL Tutor* and a learning device that is similar to *IWiLL*. It is a corpus-based, database-driven, multimodal online resource that includes a learner corpus, documents and activities that support student/instructor interaction. Similarities between the *ESL Tutor* and the *iWRITE* are present. All essays within the *iWRITE* corpus were handwritten expository essays of an English placement test at Iowa State University. Forty-five essays were typed and 1,268 errors were identified and marked. A learner corpus was developed of all the marked up essays, and on the basis of this learner corpus, *iWRITE* was set up and implemented.

Learners can access all the marked-up errors contained in the learner corpus and review all the instances in which a specific error occurred (see Figure 2.7). In addition to viewing the errors in context, users can view the highlighted errors along with an explanation of the errors. Learners can then practice on Microsoft Word worksheets on which the errors in one error category are highlighted, and by focusing on specific error categories, attempt to correct individual errors.

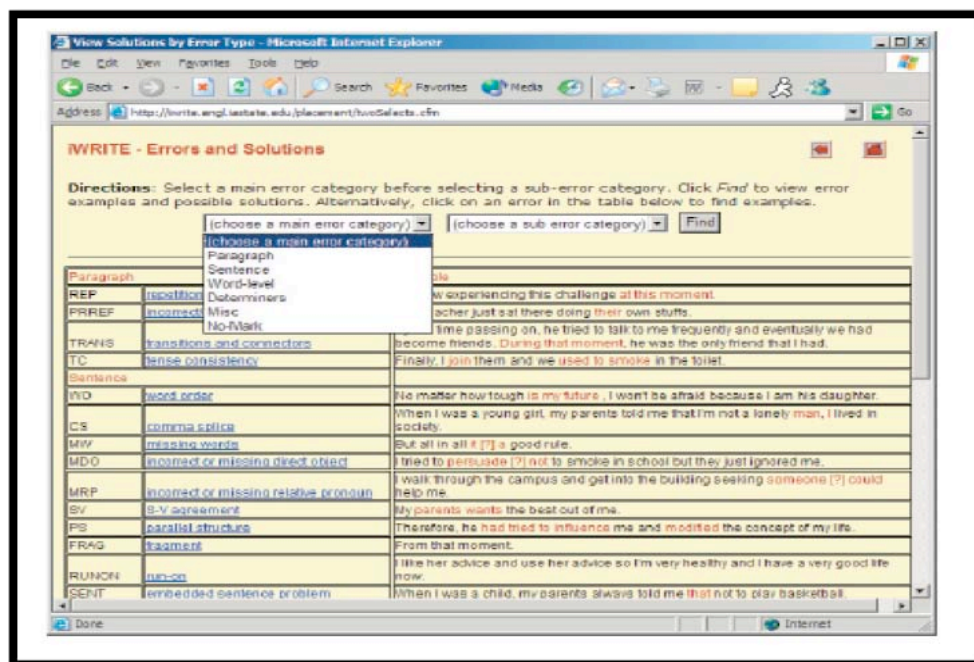


Figure 2.7. Access to all marked-up errors contained in the learner corpus *iWRITE*.

The features of the *iWRITE* program that distinguish it from *IWiLL* are that the *iWRITE* program describes errors, corrects context and includes a practice section. In addition, *iWRITE* was designed for corpus-based learning rather than collaboration. *iWRITE* also has additional features in the error recognition exercises, such as enabling learners to use a link to an online concordance program for all word-level errors, to select essays from different countries, and to watch and listen as an instructor annotates an essay in the learner corpus using the “Track Changes” feature in Word.

Hegelheimer (2006) examined the effectiveness of *iWRITE* for improving grammatical and lexical accuracy and grammar awareness for eight weeks. He also looked at learner attitudes toward this system. Nine ESL university students (Korean, Chinese, Japanese and Indonesian) in an eight-week academic writing course were asked to complete a 20-item needs analysis, two reflective journals, and to access *iWRITE*. The study reported that the ESL writers had positive attitudes toward *iWRITE*, and the

responses of the learners in a journal indicated that they found the task to be useful (mean 7.75, SD 1.67 on a 10-point scale). All learners positively responded to the question of using *iWRITE* outside of class, and an analysis of the tracking logs indicated that the writers accessed *iWRITE* an average of eight times each and remained logged on for an average of 29 minutes per access occasion. The results of the survey and 20-minute semi-structured interviews showed that they increased their grammatical awareness. The results of three essay assignments indicated that the participants had fewer errors on essays when they intensively worked on the essays using *iWRITE*. As Hegelheimer (2006) suggested, additional studies with a larger number of learners are required to determine the effectiveness of this assistance program in regard to grammatical accuracy.

Section Summary

In summary, CALL provides individualized assistance (e.g., error feedback) to students. Grammar and spell checking features of a word processor have strengths and weaknesses in their efforts to draw L2 writers' attention to surface errors. Learner corpora act as an alternative to CALL in writing assistance programs and are beneficial not only to the teachers but to languages learners because they assist learners in noticing linguistic patterns and as a result, enhance the L2 writers' knowledge of spelling and grammar. Lastly, the more recently developed web-based writing assistance programs for L2 learners, in their emphasis on grammar and vocabulary, help students to write more effectively. In general, these web-based writing assistance programs (*ESL Tutor*, *IWiLL*, *iWRITE*) are beneficial for raising grammar awareness of L2 writers by allowing them to notice specific errors and to practice correcting them or by allowing for peer editing using the target learner texts.

Chapter Summary

This chapter reviewed the theories and empirical research related to Korean EFL writers' difficulties with grammar and vocabulary, and CALL-based writing assistance programs. First, it reviewed the grammar and vocabulary difficulties that Korean EFL writers confront, and their writing challenges due to the interference of their L1. Next, this chapter described cognitive interactionist theory as the theoretical framework for web-based writing assistance environments. Lastly, based on the theoretical framework, this chapter reviewed interactivity in CALL, grammar and spelling check features, and learner corpora to aid EFL/ESL writers in raising their grammatical and lexical awareness, and the most current web-based writing assistance programs that assist EFL/ESL learners in writing more effectively with a special emphasis on grammar and vocabulary. The next chapter will describe the methodology of this study.

CHAPTER 3

METHODOLOGY

The purpose of this chapter is to describe the research methodology and procedures used in this study. The first section illustrates the web-project development. The following sections reiterate the research questions and describe the overall research design, the setting, participants, the roles of the researcher, and the treatment. Next, Phase I for the whole group and Phase II for subsample cases describe participants, the instrumentation, the data collection procedures, and the data analysis procedures of its phase of the study. The last section mentions the issues of trustworthiness of qualitative data.

Web-Project Development

In this section, I illustrate a rationale for developing a web-project for Korean EFL university students, present a web-based, data-driven writing assistance environment, *e4writing*, and demonstrate steps for developing *e4writing*.

Rationale for Developing a Web Project

Based on the review of studies on CALL writing assistance programs for EFL/ESL writers, the confirmatory evidence can be summarized as follows: First, although grammar and spelling check features help EFL/ESL writers pay attention to surface errors (Gupta, 1998; Figueredo & Varnhagen, 2006; Owston & Wideman, 1996), their functional deficiency does not enable the EFL/ESL writers to identify all grammatical and lexical errors (MacArthur, 1999). Instead, online learner corpora allow them not only to analyze L2 writers' linguistic difficulties (Gilquin et al., 2007) but also to notice their errors and then assist L2 writers to raise their grammatical and lexical

awareness (Allan, 1999; Cowan et al., 2003; Kuo et al., 2002; Tsui, 2004; Tsui, 2005). Second, the most current web-based writing assistance programs that aid EFL/ESL learners in writing more effectively have a special emphasis on grammar and vocabulary and utilize error recognition features by providing spell checking, peer revision (e.g., *CommonSpace* and *DIWE*), a learner corpus and a corpus of native speakers of English (Milton, 1998). In particular, *ESL Tutor* (Choo & Kim, 2008; Cowan et al., 2003), *IWiLL* (Kuo et al., 2001; Kuo et al., 2002; Wible et al., 2001) and *iWRITE* (Hegelheimer, 2006; Hegelheimer & Fisher, 2006) all employ online learner corpora to meet the unique needs within specific learning domains and to help EFL/ESL writers to become more aware of their errors in grammar and vocabulary.

Students need to be aware that they should use appropriate grammar, spelling and vocabulary when writing. All EFL/ESL writers need additional linguistic instruction, including a careful analysis of their writing weaknesses by teaching professionals in the field, and consistent support and resources to improve their writing skills.

A computer learner corpus is useful not only for identifying what is particularly difficult for a certain group of learners but also for emphasizing these points in the selected learning materials. In particular, an online learner corpus will provide benefits to Korean EFL students at the low-to-intermediate proficiency level who need to be more attentive to sentence accuracy. Integration of Korean EFL learner corpora within web-based writing assistance programs should assist Korean EFL writers to become more aware of authentic target language input, to more easily detect their difficulties, to revise their syntactic and lexical errors, and ultimately, to produce more comprehensible output.

For EFL teachers and researchers, learner corpora can efficiently track students' problems and assist in the preparation of resources to address them.

The *ESL Tutor*, described in Chapter 2, was designed for the purpose of correcting persistent grammatical errors for Korean ESL students in the U.S., *iWRITE*, also mentioned in Chapter 2, includes a Korean ESL learner corpus as an online grammar/writing resource. As ESL and EFL are clearly two different educational fields, an interactive, web-based writing environment needs to be created specifically for Korean EFL learners. The resources within a desirable online writing assistance environment should include Korean EFL learners' texts to assist Korean EFL university students' difficulties with grammar and vocabulary.

A Web-based, Data-Driven Writing Assistance Environment, *e4writing*

This web-based, data-driven writing assistance environment was developed by the researcher of this study, Mi-Sun Lim, primarily to raise the lexico-syntactic awareness of Korean EFL university students in order to help them enhance their writing accuracy. The website, named *e4writing* (www.e4writing.com), adopted the essential features of *iWRITE*, which enables learners to access essays that are initially displayed in unmarked form and to see the errors highlighted, with explanations of the errors clearly provided.

e4writing promotes inductive learning by providing writing samples from Korean EFL learners and provides an online grammar guide and lexical assistance via an online corpus of EFL/ESL learners and native English speakers. These features should aid in the Korean EFL students' learning of grammar and vocabulary in English writing. In other words, *e4writing* should prompt EFL university students to notice particular lexico-syntactic forms in the texts and help the students correct them. *e4writing* also has a

lexical assistance function to provide users with a single word search feature to find a specific item and an associated word search feature. This word search function could help them study specific points of grammar and words—for instance, the word structures and phrases of native speakers. In addition to these features, a comprehensive English grammar guide provides explanations of grammatical errors. All these features could help users to gain a better understanding of appropriate lexico-syntactic usage during the writing process.

Kuo et al. (2001), Kuo et al. (2002), and Wible et al. (2001) suggest that a web-based writing assistance environment should be developed based on three particular needs: (a) the learners' need for exposure to natural, authentic target language input, for comprehensible feedback on their writing production and for the use of the language to communicate; (b) the teachers' need to provide the learners with appropriate input and comprehensible feedback with the opportunity to identify error patterns in the learners' production; and (c) the researchers' need to track and retrieve large amounts of learner output in order to obtain knowledge concerning the source of the learners' difficulties. Therefore, I designed *e4writing* to fulfill these three needs. Below, Figure 3.1 shows the flowchart of creation of *e4writing*.

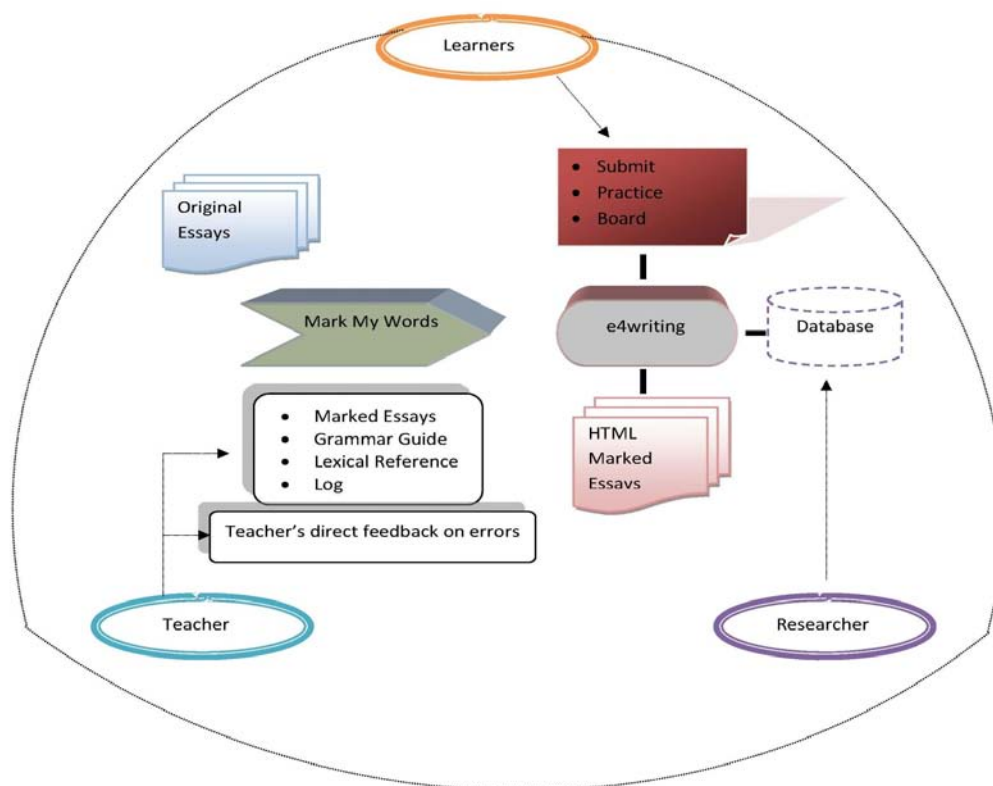


Figure 3.1. Overview of *e4writing*.

Steps to Develop *e4writing*

I illustrate the steps for developing *e4writing* as following: (a) collecting Korean EFL university students' texts, (b) marking errors on the texts and (c) creating other components of *e4writing*.

Collecting learner texts

At the beginning of fall semester in 2008, I explained this project to a lecturer teaching a writing course at a Korean university and asked her to collect Korean university students' TWE essays. 80 essays (approximately 24,120 words) were collected from the writing class as the learner corpus. The collected essays were created as Microsoft Word document formats, and 70 of these essays included the TWE essay topic

that each student had selected on the top of the essay document, whereas the remaining 10 essays did not.

Marking errors

The error marking of the collected essays was conducted by native English speakers who came well recommended by faculty members in the Second Language Education and Culture Program in the Department of Curriculum and Instruction at University of Maryland. One studied English literature at Georgetown University and had many experiences of proofreading and editing using his English language skills. The other was an undergraduate student studying foreign language and education. I provided them with one-hour training in person for use of *Mark My Words* and then they practiced with a sample essay. After I check the marked sample essay, they started to mark the other essays independently.

These native speakers used *Mark My Words* to mark their errors, and the error marking was reviewed by the researcher. *Mark My Words* was developed by the Hong Kong University of Science and Technology (HKUST) Language Center (Milton, 2004). It is an add-on toolbar for Microsoft Word that enables teachers to give feedback to students on their written assignments and by inserting a brief pre-written (and customizable) pop-up. Teachers can save time by not having to write comments about lexical and structural aspects of English (Milton, 2004, 2006) (see Figure 3.2). The errors of the collected essays were marked up based on the error categories in *Mark My Words* (e.g., careless mistake, unclear/awkward, capitalization/spelling, missing word(s), sentence structure/punctuation, redundant, singular-plural, tense, passive/active voice, wrong form, wrong mood, word order, and wrong word(s)). Appendix A shows the error

categories and descriptions. All marked-up essays were saved as web-pages, an ideal format for students to review comments in *e4writing*.

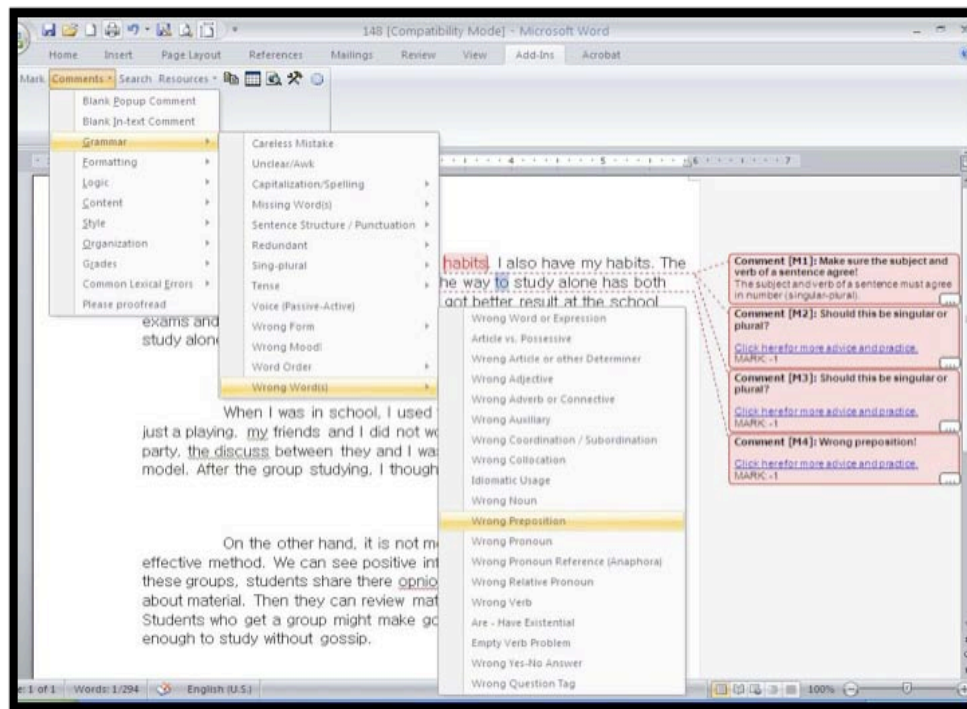


Figure 3.2. Example of essay error marking using *Mark My Words*.

Creating other components of e4writing

The *e4writing* website was created to meet the needs of students, teachers and researchers. It offers eight main page menu selections: Registration, Login, Home, Submit, View, Practice, Board and Logout. The Home section describes the purpose and the outline of the *e4writing* website. The Submit section enables learners to submit their essays as attachments, which are automatically saved in a database on the *e4writing* website so that the teacher or the researcher can easily retrieve them.

The View section (see Figure 3.3) provides learners with access to all original essays and error-marked essays that Korean EFL university students produced. All essays for this study submitted by students in the course are first be displayed in an anonymous,

unmarked format, and later, a professionally-corrected comment-filled version of the essay is shown in the View section, after peers' feedback/comments are fully discussed in the Board section.

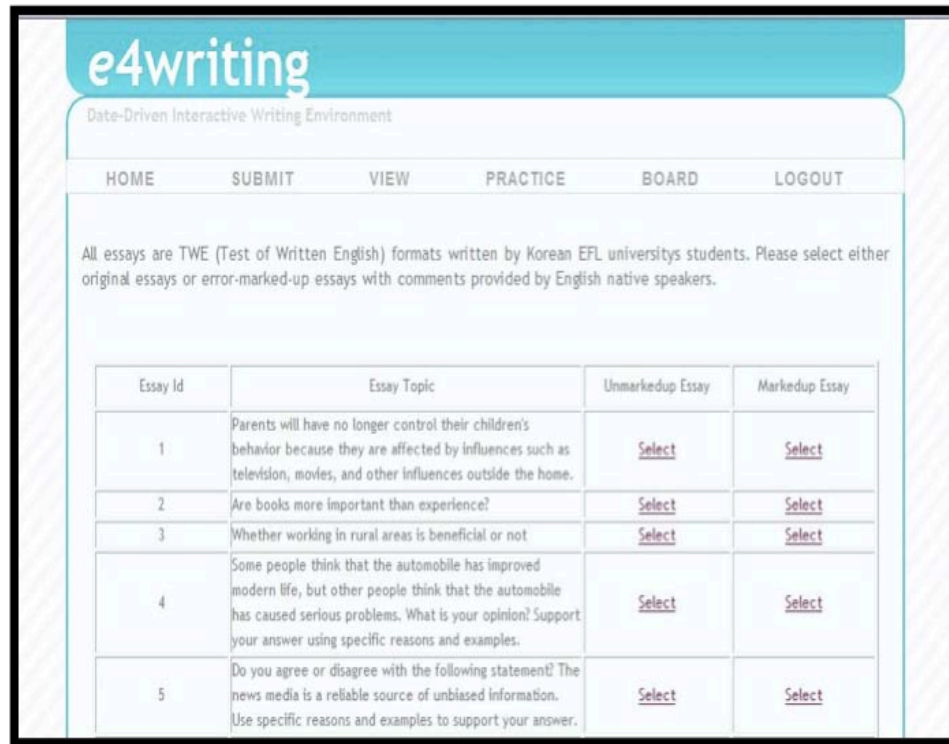


Figure 3.3. The View section in *e4writing*.

Teachers' comments, which include indirect and direct error feedback in the error-marked essays, are highlighted as a link. Teachers' direct feedback provides the correct form for students and teachers' indirect feedback is provided by underlining errors, indicating the number of errors in logs at the bottom of the error-marked essays, and identifying the nature of errors using error description codes. When students "mouse over" the link, a popup displays the comments as shown in Figure 3.4.



Figure 3.4. Example of an error-marked essay in *e4writing*.

The pop-up comment box generated by *Mark My Words* offers three choices: (a) direct feedback on the error(s) by showing correct answer(s) provided by the teacher; (b) online concordance as a lexical assistance function via corpora produced by EFL/ESL learners and native speakers to give lists of collocational patterns⁷ of a single word and an associated word; and (c) a comprehensive online English Grammar Guide, a reference tool that explains grammatical aspects linked to the marked-up errors (see Figure 3.5).

⁷ Collocational patterns: Collocational patterns are the co-occurrence of linguistic features in texts that is, which words commonly appear together. For example, the combination of “happy marriage” is often observed rather than that of “content marriage” (McCarthy, 2001).

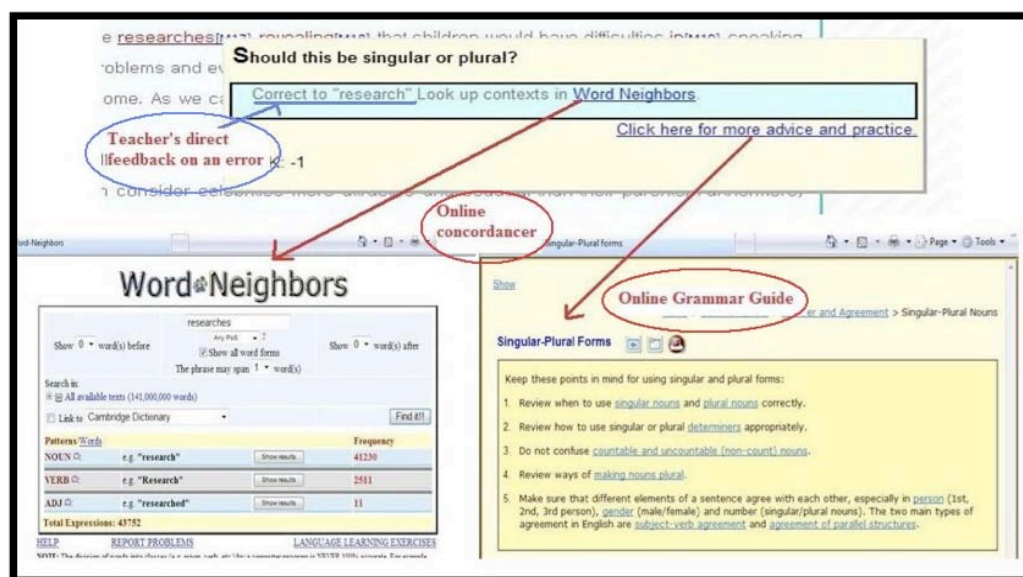


Figure 3.5. Pop-up comment on the error-marked essay in *e4writing*.

Students are also provided with a summary of comments and associated marks (including running totals). This can function as a reminder of the student's common errors (see Figure 3.6).

Log				
Description	Category	Instances	Value	Running Total
Subject-Verb Agreement	Sing-plural	2	-1 -1	-2
Singular-Plural Form	Sing-plural	2	-1 -1	-4
Wrong Preposition	Wrong Word(s)	1	-1	-5
Missing Indefinite Article	Missing Word(s)	1	-1	-6

Any scores in this table (under VALUE and RUNNING TOTAL) are for your information. Your teacher may or may not use these scores in calculating your final grade for this assignment.

Figure 3.6. Statistic Log on the error-marked essay in *e4writing*.

The Practice section (see Figure 3.7) enables students to correct errors in grammar using the Korean EFL students' anonymous, unmarked essays already posted on *e4writing*. Students are free to select an error category that they would like to practice and they are led by means of a hyperlink to their category of choice, which includes, for instance, a category of sentences that contain structural errors. If a student inputs an appropriately structured sentence in the "Correction" field and then clicks on the "Check"

button, he/she receives positive feedback (e.g., OK). If the student's input does not match the answer recorded in the *e4writing*_database, negative feedback (e.g., X) appears on the screen. The “Answer” button provides the right answer in a small pop-up window, for example, “the answer is: The other way to earn information is having first-hand experience. Other answers may also be correct.” “View” links allow the students to access the full essay, including the sentence structure errors.

Error Category	Error sentence	Correction	Check	Essay View
Preposition	The people are fed up of so many elections.		Check <input type="checkbox"/> Answer	View
Preposition	Tell to me everything she said.		Check <input type="checkbox"/> Answer	View
Preposition	They listen the radio every morning.		Check <input type="checkbox"/> Answer	View

Figure 3.7. Grammar practice in *e4writing*.

The Board section (see Figure 3.8), consisting of the “Comment” and “Q&A” subcategories, provides students with an opportunity to revise the original essays submitted by their peers, which are available in the View section. Students are prompted to provide feedback on the essays using the lexical reference and the grammar guide as references. This process helps students to increase their awareness of grammar and vocabulary accuracy in English writing.

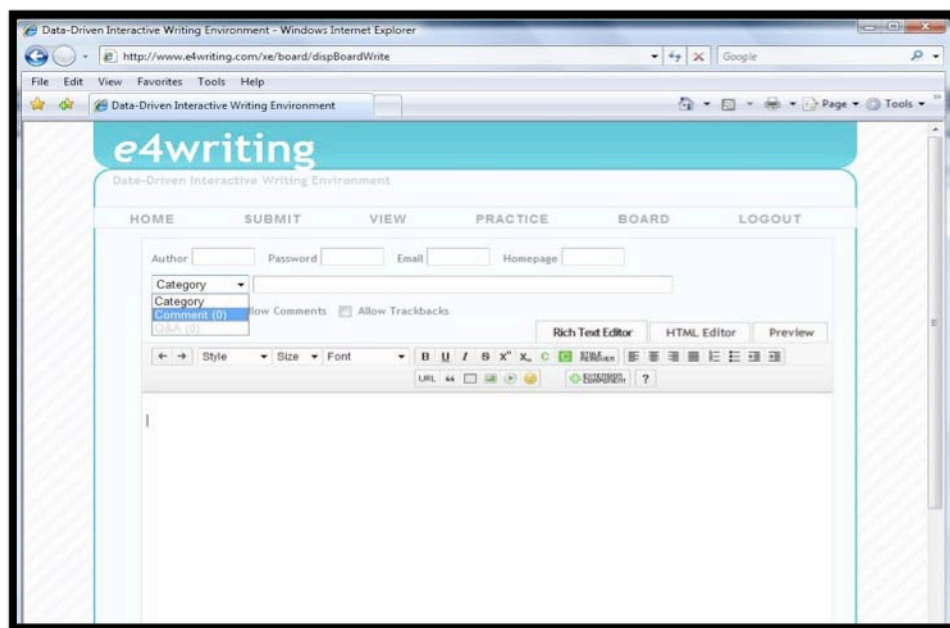


Figure 3.8. Comment and Q&A Board in *e4writing*.

Reiterating the Research Questions

The first four questions serve as a brief needs assessment and the remaining questions directly address students' perceptions and of the *e4writing* writing assistance environment and its effects on accuracy in students' essays. The research questions were classified into three categories: (1) students' academic profiles and needs analysis, (2) perceptions of *e4writing* and (3) assignments and test findings. The questions were as follows:

Students' Academic Profiles and Needs analysis:

RQ1. What were the "academic profiles" of the Korean university EFL students, and did these profiles have anything in common?

RQ2. How did the Korean university EFL students perform on the pre-writing test?

RQ3. What did Korean EFL university students view as their grammar difficulties with English writing?

RQ4. What did Korean EFL university students view as their vocabulary difficulties with English writing?

Perceptions of *e4writing*:

RQ5. What were Korean university EFL students' early perceptions of *e4writing* as a tool to enhance their grammar and vocabulary accuracy in English writing?

RQ6. What were Korean university EFL students' later perceptions of *e4writing* as a tool to enhance their grammar and vocabulary accuracy in English writing?

RQ7. Which aspects of *e4writing* did Korean university EFL students think were the most helpful and why?

RQ8. Which aspects did Korean university EFL students think were the least helpful and why?

RQ9. What suggestions did Korean university EFL students have for improving *e4writing*?

Performance on Assignments and Tests:

RQ10. What were the effects of *e4writing* on the overall accuracy of Korean university EFL students' writing assignments?

RQ11. What were the effects of *e4writing* on the overall accuracy of Korean university EFL students' writing tests?

Design of the Study

The primary purpose of this study was to investigate students' experiences with and perceptions about *e4writing* to help Korean EFL students deal with their difficulties with grammar and vocabulary. This study employed a mixed methods approach. The qualitative and quantitative phases were undertaken concurrently, and the findings were integrated in the last step of the data analysis (Cresswell, 2003).

A mixed-method study integrates both quantitative and qualitative research methods (Gay & Airasian, 2003) and has become increasingly important in L2 learning strategy research (Oxford, 2011). Hanson, Creswell, Plano-Clark, Petska, and Creswell (2005) said "using both forms of data allows researchers to simultaneously generalize results from a sample to a population and to gain a deeper understanding of the phenomena of interest" (p. 224). Tashakkori and Teddlie (2003) claimed that a multiple case study plus survey model is a classic form of mixed methods research design. Commenting on its strengths, they suggested that "[o]ne method gives greater depth, while the other gives greater breadth; hopefully, together they may give results from which one can make better. . . inferences" (p. 16).

Creswell (1998) defined a case study as an exploration of a "bounded system or a case over time through detailed, in-depth analysis collection involving multiple sources of information rich in contexts" (p. 61). As a largely qualitative-type approach, a case study aims at describing context, particularities and systematization rather than generalizability (Johnson, 1992).

As a research method, the strength of the case study lies in its ability to enable researchers to understand a phenomenon. As a result, it may yield evidence to support,

modify or reject an established theory after considering whether or not the case(s) are either consistent with or divergent from theoretical claims (Johnson, 1992). The weaknesses of some case studies may emerge from researchers' excessive emphasis on their impressions and subjectivity. Researchers need to use triangulation in their research to increase its validity and to earn trustworthiness.

Hence, this study was designed with two phases: (1) phase I for a whole group in which all Korean EFL participants were involved to discover the students' perceptions of their syntactic and lexical difficulties with English writing and *e4writing*, and the effects of *e4writing* on their written accuracy, and (2) phase II for case studies in which selected students were involved to provide a rich, deeper, more detailed picture.

This study used triangulation from multiple data sources to ensure the credibility of the data as well as to obtain in-depth, contextualized descriptions about the topic. The main sources of information used in case studies include observation, interviews, audio-visual material, documents and reports (Creswell, 1998; Yin, 2003). All of these methods and sources were used for the purpose of collecting data for this study. The qualitative methods involved three data sources: (a) interviews, (b) reflective journals from students, and (c) reflective notes from the researcher.

In addition, this study applied quantitative methods within a critical interpretive framework to help the research delve into areas in need of exploration and clarification. In the quantitative phrase, the following were collected for triangulation of multiple data sources: (a) an initial Background Questionnaire, (b) Student Perception Questionnaire, and (c) pre- and post-writing tests.

Setting

This study was conducted over the course of one semester at a university in Busan, Korea. With seven colleges and 44 departments, this university offers bachelors, masters and doctoral programs to approximately 12,000 students. It has the only established College of Education among private universities in Busan, and its College of Education was deemed an excellent college of education by the Ministry of Education. The Department of English Language Education offers a balanced systematic curriculum that is composed of four major parts: English Skills, English Teaching Theory and Methods, English Linguistics and English Literature. For more efficient training of the students, the department operates a well-equipped language lab and has native speakers of English as full-time instructors.

This department offers two elective English writing courses: (1) an English Composition course providing intensive practice in guided composition and free format composition involving sentences and paragraphs to equip the students with the basic writing skills, and (2) the Teaching Methods for English Composition course, an advanced composition course designed to improve writing skills and explore effective teaching methods of English writing for secondary students. The advanced writing course is an elective course and has three sections: two sections consisting of students majoring English Education and taught by a native speaker and one section made up of students majoring in a variety of subjects but double majoring in English Education. The latter section was also open to students who transferred from other departments or other schools to major in English Education.

I contacted the Department of English Education at the university where I had taught English courses for approximately two and a half years to receive their permission to provide me with a course for English writing instruction during the spring semester in 2009. Since the basic writing course, English Composition, is offered every fall semester and the advanced writing course is offered each spring semester, the department assigned me the advanced writing course. Before initiating writing instruction, faculty in English Education were informed about the nature of this study and allowed me to adjust the course to suit my study aims. Hence, to fulfill this study, I modified the objectives of the course (see Treatment below in this chapter).

Participants

There were 13 students enrolled in the writing course. As mentioned above, since the course allowed students double majoring in English Education and students newly majoring in English Education to participate, the students in the course came from a wide-range of programs in the College of Education. On the first day of the class, the students were informed about the nature of the course and the purpose of the research. I asked for volunteers to participate in the study and informed about non-research options for any class members who did not wish to participate in the study. One student wanted to drop the course, and 12 students agreed to participate in the study and were given a consent form to complete. The 12 participants were diverse in terms of age, gender, majors, English writing experience, and computer skills.

Table 3.1 provides the participants' demographics in terms of gender, age and grade. The participants were mostly females (n=9), and were in their 20's and 30's. Although the course was designed for sophomores, most students were juniors (25%) and

seniors (67%) since most of the students have studied English Education as their double major since they were juniors.

Table 3.1

Participants' Demographics: Gender, Age, and Grade

Classification	Respondents (N=12)		
Gender	Female: 9 (75%)	Male: 3 (25%)	
Age	20~24: 4 (33%)	25~29: 4 (33%)	30~34: 4 (33%)
Grade	Freshmen: 0 (0%)	Sophomores: 1 (8%)	Juniors: 3 (25%) Seniors: 8 (67%)

Table 3.2 provides the participants' information in terms of their major, double major and future occupations they would like to have. As the course was provided students who double majored in English education and students who had transferred to English education, the participants were from Japanese Education (17%), English Education (33%), Education (25%), History Education (8%), and Early Childhood Education (17%). Sixty-seven percent of the participants were double majoring in English Education and the rest (33%) had no double majors. Except one student (8%), 92% of the participants wanted to become English teachers.

Table 3.2

Participants' Majors and Future Occupations

Classification	Respondents (N=12)
Major	Japanese Education: 2 (17 %) English Education: 4 (33%) Education: 3 (25 %) History Education: 1 (8%) Early Childhood Education: 2 (17%)
Double Major	English Education: 8 (67 %) None: 4 (33 %)
Future Occupation	English Teacher: 11 (92 %) Other: 1(8 %)

Table 3.3 depicts the participants' backgrounds concerning English and English writing. Most participants had learned English over 11 years on average, 92% of

participants had taken the TOEIC exam and their highest score were 767 on average.

Seventy-five percent of participants' responded "moderate" to the question of enjoyment of English writing and 25% of them responded "not much." Most students were likely to regularly write in English; 50% of participants wrote 1~3 times a month and 33% wrote 4~6 times a month. Two-thirds of the students preferred pen-and-paper writing to computer-based word processor writing.

Table 3.3

Participants' Background in English and English Writing

Classification	Respondents (N=12)
Years of English learning	1~5: 1 (8%) 6~10: 5 (42%) 11~15: 4 (33%) 16~20: 2 (17%)
TOEIC Score ⁸	400~690: 3 (27%) 700~790: 2 (18%) 800~890: 4 (36%) 900~990: 2 (18%)
Enjoy English Writing	Moderate: 9 (75 %) Not much: 3 (25 %)
Frequency of English Writing	1~3 times per month: 6 (50 %) 4~6 times per month: 4 (33 %) 1 time per year: 1 (8 %) None: 1 (8 %)
Preferred way for English writing	Pen & Paper: 9 (75 %) Computer (Word Processor): 3 (25 %)

Table 3.4 gives information on the participants' technological background. Most students liked to use computers ("very much"=25%, "moderate"=75 %) and all students could access the Internet at home. Forty-two percent of the participants used computers and the Internet less than 1 hour a day, 42% less than 3 hours a day, and 17% less than 5 hours a day.

⁸ One respondent did not answer.

Table 3.4

Participants' Background in Computers and Internet Use

Classification	Respondents (N=12)
Like to use computers	Very much: 3 (25 %) Moderate: 9 (75 %)
Available to use Internet at home	Yes: 12 (100 %) No: 0 (0 %)
Hours per day using a computer & Internet	0.5~1: 5 (42 %) 1.5~3: 5 (42 %) 3.5~5: 2 (17 %)

Roles of the Researcher

For this study, first-hand observation provided me, a participant observer, with a solid understanding of the contexts in which the students' learning/writing behaviors occurred. This helped to ensure comprehensive interpretations of those behaviors.

However, when the researcher (as a participant observer) also has to perform another role (i.e. in this study the role of a teacher), a concern arises that the credibility of the observation and the analysis could be affected. Regarding this dual role issue, Isakson and Boody (1993) described both the advantages and disadvantages. Being in the classroom allows the researcher to be aware of what is taking place. While leading the students in learning activities, the researcher can get to know the students' feelings and attitudes more easily. Furthermore, researchers and teachers normally have similar kinds of questions and thoughts. At any rate, being involved in "a sustained and intensive experience with participants" (Creswell, 2003, p. 184) can also lead the researcher to have biases that may affect his or her analysis.

To avoid this shortcoming, Isakson and Boody (1993) suggested that the researcher should explicitly articulate his or her rationale in making decisions about different procedures of the study and be clear about his or her interests, values and beliefs. Asking questions such as "What did I do?" and "Why did I do it?" and relying on

multiple sources of data and methods of analyses can help decrease any biases. Bearing these pros and cons in mind, I took on the roles of a researcher (as a participant observer) and of a teacher in this study. I did not emphasize my role as a researcher in the classroom, though, except when giving students instructions and training about the procedures of activities for the data collection. In this fashion, the students generally will recognize me as a “normal” teacher.

Students were informed at the very beginning that expressing their thoughts during interviews would not affect on their grades. I expected that my role as a researcher would have a minimal effect on the students’ learning /writing behaviors. At the same time, my role as a teacher also had a minimal influence on the reports they made about their perceptions of grammar and vocabulary difficulties and *e4writing*. The information obtained from my own classroom observations were used as supplemental data in this study.

Treatment

The Teaching Methods for English Composition course was initially an advanced composition course designed to improve writing skills and explore effective teaching methods of English writing for secondary students. Students enrolled in the course were expected to have basic writing skills. Before starting the course, I had a meeting with faculty in the department of English Education and informed them about the nature of this study. With the permission of the faculty, the objectives of the class were changed and I did not need to provide lessons for teaching methods of English writing. Instead, I could focus on providing intensive practice of academic formal writing involving sentences and paragraphs to improve students’ writing skills.

The class met every Wednesday from 1:00 to 3:00 p.m. and Friday from 3:00 to 4:00 p.m. The class was held in an ordinary classroom with equipment such as an overhead projector, computer, and video camera for classroom observations. I focused on (but was not limited to) helping students demonstrate competence in writing tasks. This included helping them learn to revise essays and edit them for grammatical and lexical errors in order to produce extended essays. The class participated in group, pair, and individual revision activities with essay examples and was provided with grammatical and lexical lessons. For this study as well as the writing course, Korean EFL writing essay examples from *e4writing* and other materials were provided in class. Students were required to submit two reflective journals in Korean about their thoughts and experiences, to submit eight writing assignments (the assignment one for describing the reasons of taking this writing course and the rest of them on the TWE topics) (see Appendix B) and to take two writing tests, an in-class writing activity in the beginning of the course (see Appendix C) and a final exam at the end of the semester (see Appendix D). While the assignments could be submitted via computer, the tests were handwritten in class. All these plus class participation were officially graded. Since I conducted the lessons based on the common difficulties shown in the essay assignments students submitted, I did not specify a weekly schedule in the syllabus (see Appendix E).

Most of the class activities included finding and correcting grammatical and lexical errors. I modified the online essays that Korean EFL students wrote by selecting parts of an essay, underlining specific words, or making fill-in-blanks for these activities. Although the materials for the activities were modified, they were authentic texts still including grammatical and lexical errors. I asked the students to work in groups in the

beginning of the course, and then in pairs, and individually at the end of the course. The students were asked to fill correct grammatical items in blanks (see Appendix F) and to correct grammatical and lexical errors in essays (see Appendices G, H, I and J). Along with the class activities, I delivered lessons about grammar rules and lexical choice.

Of the 16-week schedule, one week's worth of lessons were officially canceled due to the university's festival from May 18th to May 20th. In addition, because three participants were enrolled in the College of Education, they were required to complete four-week student teaching during May. These three participants (Bo, Min, and Young) did not attend the class from May 4th to May 29th, 2009.

The writing essays collected from the assignments and the tests were first error-marked by me and then by a native speaker who had marked the errors on the 80 essays included in *e4writing* before the beginning of the writing course. I reviewed all the error-marked essays again before posting them on *e4writing*. This process was employed to maintain the consistency of correcting errors and to increase the reliability of inter-rater agreement.

Phase I: Whole Group

Participants

For the whole-group analysis, the participants were the 12 Korean EFL students enrolled in the writing course in spring 2009. They were between 22 and 32 of age. There were three male and nine female students in the College of Education. They majored in different subjects; Education, English Education, Japanese Education, History Education, and Early Childhood Education; however, eight participants double majored in English Education and four participants majored in only English Education. The students were

juniors and seniors except for one sophomore participant. The reason for this relatively wide range in terms of age, majors, and grades was that the writing course was designed for students who double majored in English Education and who transferred from other departments or other schools to the Department of English Education. Thus, some students in this course had already graduated from college and had transferred to the Department of English Education at Silla University.

Instrumentation

Multiple data sources were used throughout the data collection stage as suggested by Lincoln and Guba (1985). For participants' perceptions of grammar and vocabulary difficulties with English writing (a needs assessment for the validation of the *e4writing* system), the sources utilized include the researcher's reflective notes, a pre-study student perception questionnaire, an interview, and a reflective journal. For the main topic, the validation of the effectiveness of *e4writing*, the data sources are: an interview, a reflective journal, a post-study student perception questionnaire, and a post-writing test.

Researcher's reflective notes

The purposes of the researcher's reflective notes are two-fold: (a) to help the researcher get the most out of the participants' various activities, and (b) to obtain supplementary evidence that assures consistency and validity, from combining the data with other evidence. During the 16 weeks of classroom activities, I wrote reflective notes to capture the main ideas, themes and insights after class.

Background questionnaire

An initial background questionnaire was designed both in English and Korean (see Appendix K). The Korean version was distributed after the participants were briefed

on the purpose of the study and had the opportunity to ask questions about what would be involved.

The purpose of the background questionnaire was to obtain a better understanding of the participants' background, language and technology experience. In the first week of the semester, some background information was gathered on the participants' age, gender, major, length of time studying English, scores on standardized English tests (e.g., TOEIC), enjoyment of writing in English, their familiarity with computers and the Internet, and Internet accessibility at home..

Student perception questionnaire

The student perception questionnaire was also written in both English and Korean and the Korean version was distributed as the background questionnaire (see Appendix L). The purpose of the student perception questionnaire was to collect information about changes in the students' writing, especially regarding grammar and vocabulary and the participants' experiences with and evaluation of *e4writing*. Aladwani and Palvia (2002) suggested that it is important to capture key characteristics of web site quality from the users' perspective and that web quality attributes and scales need to be relevant to web users. Aladwani and Palvia (2002) developed a 25-item instrument measuring four dimensions of web quality: (a) specific content, (b) content quality, (c) appearance and (d) technical adequacy as seen in Table 3.5. I modified the 25-item instrument for the design of the student perception questionnaire.

Table 3.5

User-perceived Web-quality Instrument (Aladwani & Palvia, 2002)

	Strongly disagree				Strongly agree			
1. ____'s web site looks secured for carrying out transactions (e.g. uses SSL, digital certificates, etc.)	1	2	3	4	5	6	7	
2. ____'s web site looks easy to navigate through	1	2	3	4	5	6	7	
3. ____'s web site has adequate search facilities	1	2	3	4	5	6	7	
4. ____'s web site is always up and available	1	2	3	4	5	6	7	
5. ____'s web site has valid links (hyperlinks)	1	2	3	4	5	6	7	
6. ____'s web site can be personalized or customized to meet one's needs	1	2	3	4	5	6	7	
7. Web pages load fast in ____'s web site	1	2	3	4	5	6	7	
8. ____'s web site has many interactive features (e.g. online shopping, etc.)	1	2	3	4	5	6	7	
9. ____'s web site is easy to access (i.e. has a reflective and widely registered name)	1	2	3	4	5	6	7	
10. The content of ____'s web site is useful	1	2	3	4	5	6	7	
11. The content of ____'s web site is complete	1	2	3	4	5	6	7	
12. The content of ____'s web site is clear	1	2	3	4	5	6	7	
13. The content of ____'s web site is current	1	2	3	4	5	6	7	
14. The content of ____'s web site is concise	1	2	3	4	5	6	7	
15. The content of ____'s web site is accurate	1	2	3	4	5	6	7	
16. In ____'s web site, one can find contact information (e.g. e-mail addresses, phone numbers, etc.)	1	2	3	4	5	6	7	
17. In ____'s web site, one can find firm's general information (e.g. goals, owners)	1	2	3	4	5	6	7	
18. In ____'s web site, one can find details about products and/or services	1	2	3	4	5	6	7	
19. In ____'s web site, one can find information related to customers' policies (e.g. privacy and dispute details)	1	2	3	4	5	6	7	
20. In ____'s web site, one can find information related to customer service	1	2	3	4	5	6	7	
21. ____'s web site looks attractive	1	2	3	4	5	6	7	
22. ____'s web site looks organized	1	2	3	4	5	6	7	
23. ____'s web site uses fonts properly	1	2	3	4	5	6	7	
24. ____'s web site uses colors properly	1	2	3	4	5	6	7	
25. ____'s web site uses multimedia features properly	1	2	3	4	5	6	7	

The information gathered served as supplemental data. The student perception questionnaire was concerned with the following: (a) attention to errors in the online learner corpus, (b) carefulness in grammar and vocabulary use, (c) improvement in accuracy in grammar and vocabulary in English writing and (d) effectiveness of teachers' pop-up feedback, the online concordance and the online grammar guide. Additionally, they evaluated: (a) the effectiveness of *e4writing*, (b) the enjoyment of the use of *e4writing*, and (c) the possibility to continue using *e4writing*. The student perception questionnaire contained three open-ended questions: (a) five aspects they thought the most helpful in *e4writing* and the reasons of the selections, (b) five aspects they thought the least helpful in *e4writing* and the reasons of the selections, and (c) any suggestions for improving *e4writing*. In order to simply and reliably collect data, I included a list for the

participants to choose their five most and least helpful aspects in *e4writing* from as seen in Table 3.6.

Table 3.6

List of e4writing Aspects

Aspects of <i>e4writing</i>	
1	Korean EFL unmarked-essays in <i>e4writing</i>
2	Korean EFL error-marked-essays in <i>e4writing</i>
3	Pop-up error feedback in error-marked-essays in <i>e4writing</i>
4	Teacher's direct error feedback of the correction form
5	Teacher's indirect error feedback
6	Online concordancer as a vocabulary reference in error-marked-essays in <i>e4writing</i>
7	Online grammar guide in error-marked-essays in <i>e4writing</i>
8	Grammar practices using the Korean EFL essays in <i>e4writing</i>
9	Board for comments and Q&A in <i>e4writing</i>
10	Statistic logs as an error summary in error-marked-essays in <i>e4writing</i>
11	Others

The questionnaire was user-friendly, with the respondents answering in Korean, and included two types of questions: Likert scale questions and open-ended questions. Likert scale questions (using responses from 1 to 5) were used in order to allow for options in responding and to give some indication of the strength of feeling. Open-ended questions, positioned at the end of the questionnaire, were used to obtain the students' own personal opinions.

Writing assignments

As part of the students' work during the class (not just for the study), students submitted eight writing assignments on a regular basis. Topics for the writing assignments were selected from the TWE topics offered by ETS. The students were provided with the selected topics for the writing assignments as shown in Appendix B a

week prior to the due date. As these writing assignments were completed outside the classroom without a time limit, which means I could not control the setting for writing the assignments, I had to provide different guidelines for the assignments from those for the writing. The writing assignments were supposed to be written based on TWE topics, but there was no time limit whereas the tests must have been done within 30 minutes. However, the length per assignment was recommended. As seen Appendix B, one or two paragraphs were recommended to produce. I clarified in class one or two paragraphs include about 150 to 200 words. The students were encouraged to write them using either pen-and-paper or a computer but to submit in a *Word* format to *e4writing*.

Pre- and post-writing tests

Students took pre-and-post tests that in the second and 16th weeks of the course respectively. As the writing assignments, topics of the tests were selected from the TWE topics (see Appendixes C and D). The tests were paper-based and taken in the classroom. The students completed the tests within the 30-minute time frame as for the TWE (ETS, 2004).

Reflective journals

Students submitted two reflective journals as part of their work during the class and for this study. Study participants wrote brief reflective journals about their experiences to date with *e4writing*. The students were provided the *e4writing* aspects list (see Table 2) before they described their perceptions of *e4writing* to gather data for (a) five aspects they thought the most helpful in *e4writing* and the reasons of the selections, and (b) five aspects they thought the least helpful in *e4writing* and the reasons of the selections.

The first reflective journal included their general perceptions of English composition experiences and difficulties with the past, and early (second week) perceptions of the online learner corpus (i.e., online essays) and *e4writing*. The first journal was collected during the fourth week of the semester, and the second, in the 13 week. The second reflective journal included their perceptions of *e4writing*. The second journal included the following questions: (a) Which aspects of *e4writing* helped the students' overall English writing, (b) Which aspects of *e4writing* helped the students' English grammar and vocabulary accuracy, and (c) suggestions for improving *e4writing*.

Interviews

Questionnaires are useful for collecting simple, factual information, for example, whether or not students liked or disliked *e4writing*. Questionnaires are not so useful for collecting more detailed information (e.g., why they liked or disliked the online writing environment). In this study, collecting highly detailed data was important, so interviews were used as one of the main data collection tools. Appendix M shows the interview protocol. Because this study was investigative and interpretive, some questions could arise only after the study had begun. Therefore, the interview was in a semi-structured format, and the main goal of the interview was to cover broad themes with all the respondents. Another goal of interviews in this study was to ask follow up questions on the topics participants mentioned in their reflective journals.

In the fifth week of the semester, the participants in the study took part in a brief, 20 minute interview about (a) their preferences concerning English writing, (b) grammar and vocabulary difficulties with English writing, (c) solutions to deal with these difficulties, and (d) the pre-writing test they took in the second week of the semester.

They were asked about their initial experiences with *e4writing*, their actual use of the resources and their opinions regarding its use. In the 14 week, participants also took part in a final, 20-minute interview about their experiences with and perception of *e4writing*. In order to analyze any changes in the responses, this final interview included questions about any changes in their writing in general and in their writing in terms of accuracy.

Interviews were conducted in Korean to make oral expression easier and they were audio recorded and transcribed. Additionally, self-reflection notes on prominent aspects of the interview were made during the interviews.

Data Collection Procedures

The class met twice per week for a total of three hours per week over the course of 16 weeks during the spring semester in 2009 (March – June 2009). During the first class the participants were informed about (a) the purpose of the study, (b) the type of data collected and (c) the procedures implemented to maintain anonymity and confidentiality. This gave participants some background information about the study and helped establish a relationship of trust, comfort, and communication between the researcher and the participants before the study began. All students in the class worked with *e4writing* as a regular part of the course. All students enrolled in the class were given a consent form to complete, and I asked for volunteers to participate in the study. I informed that I would provide non-research options for any class members who did not wish to participate in the study. At any rate, everyone in the class used the online writing assistance environment, and all students who completed the course successfully, whether or not they participated in the study, received the full three course credits. Data relevant to this study were collected as described below in Table 3.7.

Table 3.7

Data Collection Schedule by Weeks

Week 1	The participants completed the initial background questionnaire and created a user name and password for <i>e4writing</i> . Afterwards, the learners were given unrestricted access to the system. Following a brief introduction to <i>e4writing</i> , an activity in <i>e4writing</i> was demonstrated aimed at helping them familiarize themselves with the program. The TWE topic for the assignment one was provided.
Week 2	The essays collected from assignment one were displayed in <i>e4writing</i> with errors marked. The TWE topic for assignment two was provided.
Week 3	The pre-writing test was administered. The second essay assignment, including teacher's feedback on their errors, was viewed in <i>e4writing</i> so that students could be encouraged to analyze their most common errors.
Week 4	The error-marked essays from the pre-writing test were viewed in <i>e4writing</i> . Initial perceptions of their grammar and vocabulary difficulties and of the potential use of the <i>e4writing</i> were obtained through the first reflective journal.
Week 5	An out-of-class semi-structured interview (20 minutes) was used to clarify the first reflective journal responses and to assess the participants' perceptions of grammar and vocabulary difficulties with English writing and their experiences with <i>e4writing</i> .
Week 13	The participants' experiences with and evaluation of the online learner corpus (i.e., online essays) and <i>e4writing</i> were documented in the second reflective journal.
Week 14	The participants were given an out-of-class semi-structured interview (20 minutes) to clarify their second reflective journal responses and to assess the participants' experiences with and evaluation of the online learner corpus and <i>e4writing</i> .
Week 16	The post-writing test was taken. The participants were asked to complete the student perception questionnaire.
Week 2-16	All participants had 20-four hour/seven day a week access to <i>e4writing</i> . The researcher observed the participants' behaviors in the classroom.

Data Analysis Procedures

In the qualitative framework, analyzing data is an on-going process (Miles & Huberman, 1994). The data analysis process shaped themes that were common across the sampling of data collected. Data reduction for each data set was generally employed since most of the data were taken from lengthy texts.

Through data analysis, raw data were reviewed for possible interpretations (Stake, 1995), and all interviews were audiotaped and transcribed. I reviewed the raw interview transcripts and the participants' reflective journals concerning their grammar and vocabulary difficulties with English writing and their activities with the Korean EFL learner corpus and in *e4writing* as a first step in data analysis.

In the second step of data analysis, the data were reviewed for general, emerging patterns. I coded interview transcripts. "Codes are labels used to describe a segment of text or an image" (Creswell, 2002, p. 267). Further, I organized the participants' reflective journals in order to search for emerging patterns. The third step involved the classification of the coded data, finding emerging themes and patterns, and making connections among data in order to identify the participants' perceptions of their lexical and syntactic difficulties and the participants' experiences with and application of the Korean EFL learner corpus and *e4writing*.

For these second and third steps, I employed qualitative data analysis software, Nvivo (ver. 8). The transcripts and the students' reflective journals in text format (DOC format) were imported into Nvivo, the codes were organized into hierarchical nodes and analyzed with the coded nodes. Nvivo enabled me to comment on selected content using 'annotations' and visually display findings using 'charts' so that I could easily view the emerging themes and patterns in column graphs. Quantitative analysis involved the numeric scoring of questionnaire and essays in analyzing the results of statistical tests (SPSS Version 16.0). All data were coded and entered into SPSS for initial analyses in order to determine frequencies, means and standard deviations.

The assessment of grammatical and lexical accuracy was conducted on essays. I identified grammatical and vocabulary errors using *Mark My Words* and then the native speaker did for the same essay using *Mark My Words*. The native speaker was the marker who involved in error marking for the online essays of *e4writing*. When we disagreed with the error identification, we discussed by email to come to a fair evaluation. As I am a foreigner, the native speaker's decision was weighted heavily in the error identification.

The assessment was measured in a error to word ratio, a method used by Kroll (1982) to tabulate composition errors. This method shows how often an error is found in a given composition and it is particularly useful since it “allows for comparison of compositions of any length” (Kroll, 1982, p. 21). The guidelines used for the word count in the present study are based on the word count guidelines provided by Polio (1997, p. 140), which are as follows:

1. Count contractions as one word whether correct or not.
2. Count numbers as one word.
3. Count proper nouns in English and other languages as they are written.
4. Do not count hyphenated words as single words (e.g., well-written = 2 words).
5. Do not include the essay title in word count.
6. Count words as they are written, even if they are incorrect (e.g., alot = 1 word).

Regarding overall writing quality, each essay from the two tests were graded by two readers (a native English speaker and me) on the basis of the TWE scoring guide (See Appendix N). The scores range from 6 to 1, including 0.5 intervals and a paper graded with each score is described as following:

1. A paper graded with the score of 6 is perceptive and intelligent, reflecting a sophisticated analytical response to all parts of the writing assignment.
2. A paper with the score of 5 is clearly organized and developed and is skillful in sentence construction, variety, and word choice.
3. A paper graded with a 4 is reasonably developed and focused; and may have minor weaknesses easily corrected with casual editing, but uses appropriated sentence structure and diction.
4. A paper graded with a 3 is either fails to develop a focused response or is weak in structure, syntax, or mechanics.
5. A paper graded with a 2 is a minimal analysis of the writing assignment; lacks focus, direction, coherence, or completion; and is often characterized by persistent errors in grammar, sentence structure, spelling, or usage.
6. A paper graded with a 1 demonstrated incompetence in writing.

In order to ensure objectivity between the readers, the readers assigned scores on the basis of the overall quality of an essay in response to the assigned task in holistic scoring. When the two assigned scores differed by more than one point on the scale, the discrepancy had to be adjudicated by a third reader. Otherwise, the scores from the two readings of an essay were averaged. A single score was determined for that essay.

The reflective notes by the researcher were used as baseline data for the analysis of the class. In the final step, both quantitative and qualitative data were integrated into a coherent whole.

Phase II: Subsample Case Studies

Participants

In the second week of the course, the 12 students were asked to complete the pre-writing TWE test. One of the purposes of the pre-writing test was to determine the selection of the case study participants. The results of the pre-writing samples rated by both a native speaker and me indicated total words, total syntactic and lexical errors, error ratios and overall scores graded on the basis of the TWE scoring guide (ETS, 2004). The other resource of the selection was the initial background questionnaire that pertained to gender, age, major, double major, background about English and English writing, and technological background.

Based on the results of the pre-writing test and the survey, four students were selected as the case study participants; two students in the High Accuracy (HA) group and two students in the Low Accuracy (LA) group.

Table 3.8 indicates the participant's performance in the pre-writing test in terms of total words, total errors, error ratio, and TWE score. Table 3.9, "Overview of case study participants," provides the overview of critical experiences and learning contexts that were considered to be relevant to this study.

Table 3.8

High-Accuracy Group and Low-Accuracy Group in the Pre-Writing Test

Participants		Total words/errors	Error Ratio (%)	TWE Score
High Accuracy (HA) Group	Bo	171/41	24	3.5
	Jin	156/31	19.9	3.5
Low Accuracy (LA) Group	Lia	131/47	35.9	3
	Young	111/51	45.9	3

Table 3.9

Overview of Case Study Participants

	Participants			
	Bo	Jin	Lia	Young
Gender	Male	Female	Female	Male
Age	30	24	23	29
Major/ Double Major	Education/ English Education	English Education/ None	Early Childhood Education/ English Education	Japanese Education/ English Education
Grade	4	3	4	4
Occupation you would like to have	English Teacher	English Teacher	English Teacher, Announcer	Stringed instrument service
Years of English learning	5	14	10	7.5
TOEIC Score	830	855	560	430
Enjoy English Writing (Purpose)/ Frequency of English Writing	Moderate (Email)/ 1 time per week	Moderate (Schoolwork, email, nonschool journal or diary, messenger chatting)/ 1 ~ 2 times per week	Moderate (Writing Exercises, Jobs)/ 3 times per month	Not much (Schoolwork, email, client service)/ 1 time per month
Like to use computers (Purpose)	Very Much (Email)	Moderate (Email, messenger chatting, Internet surfing)	Moderate (Schoolwork, Internet surfing)	Very Much (Schoolwork, messenger chatting, Internet surfing, online lectures)
Access to Internet at home? (Hours per day using Internet)	Yes (1 hour)	Yes (3 hours)	Yes (1 hour)	Yes (4 hours)
Preferred way for English writing	Computer (Word processor)	Pen & paper	Pen & paper	Pen & paper

Instrumentation

For participants' perceptions of grammar and vocabulary difficulties with English writing, the sources utilized included the background questionnaire, the researcher's reflective notes, interviews, and students' reflective journals. For the main topic, validation of *e4writing*, the data sources were: the researcher's reflective notes, interviews, students' reflective journals, and essays from pre-and-post-writing tests. Interviews and reflective journals were mainly employed for case study.

Data Collection Procedures

Data collection in Phase II were employed the same procedures as those in Phase I. The data collection schedule is shown in Figure 3.9.

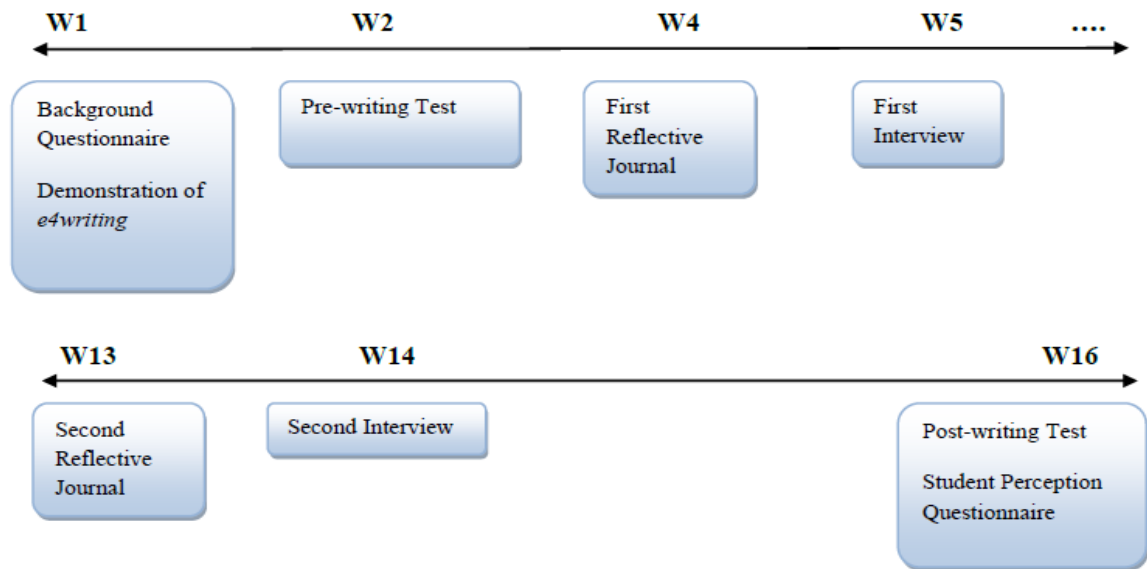


Figure 3.9. Data collection schedule by week.

Data Analysis Procedures

In Phase II, I first performed a single case analysis and then conducted a cross-case analysis in order to gain more insight students' perceptions of grammar and vocabulary in English writing and their perceptions of *e4writing*.

Single case analysis

The transcripts of the interviews and the written reflective journals, as the major data sources, were evaluated to uncover common themes regarding the participants' perceptions. The background questionnaire and students' essays were used as supplementary sources and the researcher's reflective notes were used as baseline data for the analysis of the class. After reading and re-reading the major documents, a text of the transcripts was divided into separate units, by topic, for further analysis.

Within each unit of analysis, the students' perceptions of English grammar and vocabulary in writing and their perceptions of *e4writing* were evaluated by means of open coding techniques (Strauss & Corbin, 1998). The transcripts were color-coded and descriptive, labeling terms were used. The transcripts and codes then were re-read and re-evaluated, by a process of pattern codes, to determine if relationships among the codes existed (Miles & Huberman, 1994). Similar codes that appeared were broken down by pattern code into descriptive codes (Miles & Huberman, 1994). This pattern coding made it easier to review the data and help make important patterns or themes more obvious.

Nest, the qualitative data were transformed. Qualitative data were converted into numerical codes that can be represented statistically (i.e., *quantitized*; Tashakkori & Teddlie, 1998) to create a single comprehensive dataset. I used a common strategy by counting the frequency of patterns or themes that occur and enumerate the percentages of

the occurring patterns and themes associated with a given category of respondents (Onwuegbuzie & Teddlie, 2003). The numbering of data was graphically displayed to display emergent themes and their relationships. The numerical data obtained from the essays from tests were quantitatively analyzed using statistical tests. In the final step, both quantitative and qualitative data were integrated into a coherent whole.

Cross-case analysis

A cross-case analysis was performed in order to gain more insight into the larger phenomena of Korean EFL university students' awareness of their difficulties with English grammar and vocabulary, and their perceptions of *e4writing*. This cross-case analysis was conducted utilizing three cross-case analysis methods (i.e., partially ordered displays, conceptually ordered displays, and time ordered displays) suggested by Miles and Huberman (1994), and these methods helped to better describe and explain the phenomena of Korean EFL students' perceptions.

Through a partially ordered meta-matrix, the descriptive data from different individual cases could be displayed in a standard format so that relevant data could be viewed and conclusions drawn. Based on the major descriptions of phenomena displayed under the partially ordered meta-matrix, I identified similar and different characteristics of the participants' awareness and experiences and ultimately, displayed them in a conceptually ordered manner, with a content analytic summary table. The conceptually ordered displays were used to show similarities and differences among the cases. Thus, the researcher can focus on the general content of the data rather than on the specifics of each particular case (Miles & Huberman, 1994). I identified the similarities and differences between the high accuracy group and the low accuracy group, and also the

common and different characteristics between the high-accuracy participants and the low-accuracy participants. The meta-matrix, organized sequentially by time, was used to compare responses received from interviews and reflective journals over the course of the study, and this comparison was used to reveal any changes in the respondents' understanding and ideas. The patterns of change that emerged during this time-ordered sequencing were then compared in graphic format.

As with the single case studies, the qualitative data were quantitized to show emergent themes and their relationships in a powerful way and both quantitative and qualitative data were integrated into a consistent whole.

Trustworthiness

Lincoln and Guba (1985) list several measures that qualitative researchers should take to ensure the trustworthiness of their data. These measures help establish the credibility, transferability, dependability and conformability of their conclusions.

In order to ensure credibility, the present study follows three criteria recommended by Lincoln and Guba (1985): prolonged engagement, persistent observation, and triangulation of multiple methods and data sources. Data sources include students' reflective journals, interview transcripts, recall transcripts, field notes, background questionnaires, student perception questionnaires, students' writing samples, screen records, automatic online logs, and analytic memos. The methods employed in the study, namely, observation, case study and document analysis, will be utilized to verify the data and findings. My involvement throughout the entire 16-week writing course and persistent observation as the teacher will help to make certain the results of the study have a high level of credibility. In attempting to gain an in-depth understanding of the

phenomena under study, peer debriefing with an experienced Korean teacher of English will be also conducted at the phases of collecting and analyzing data in order to verify the accuracy of my selective translations.

The criterion that is most problematic in regard to the issue of trustworthiness of qualitative data is transferability. Instead of presenting general conclusions within a wide range of circumstances, qualitative research provides a detailed understanding of a phenomenon in a specific setting. In this study, the in-depth descriptions of multiple cases within varied circumstances will help to ensure the findings have a high degree of transferability. In order to enhance the dependability and conformability of this study, the method of member checking will be utilized. In this process, participants will be provided opportunities to check my interpretations of their thoughts and behaviors stemming from our ongoing conversations and interviews.

Chapter Summary

In this chapter, the development of the *e4writing* was described. Then, this chapter described the research methodology. This study mainly used a mixed methods design. The data were collected from Korean EFL university students enrolled in a 16-week writing course in South Korea. Instruments included: (a) interviews, (b) reflective journals, (c) Background Questionnaire, (d) Student Perception Questionnaire, (e) pre- and post-writing tests, (f) writing assignments, and (g) researcher's reflective notes. In both Phase I, involving the whole group of 12 participants, and Phase II, involving the four-person subsample (case studies), I outlined the participants, instrumentation, data collection procedures, and data analysis procedures. Chapter 4 provides whole-group findings, and Chapter 5 focuses on case studies.

CHAPTER 4

PHASE I: WHOLE-GROUP FINDINGS

The purpose of this research was to examine students' experiences with and perceptions about *e4writing* for Korean EFL university writers. More specifically, this study aimed to reveal (a) Korean EFL university students' self-perceptions of their lexico-syntactic difficulties with English writing (as a needs assessment for the validation of the writing assistance environment) and (b) Korean EFL university students' perceptions about and the effects of *e4writing*, which provided individualized help and opportunities for interaction, on the writing of Korean EFL university students. The data for the study were collected from 12 students, who participated in this project over the 16-week spring semester in 2009 at a private university in Busan, Korea.

This chapter presents the 12 Korean EFL university students' overall perceptions of their syntactic and lexical difficulties with English writing and their overall perceptions about and the effects of *e4writing*. The findings were derived from sets of data collected via background questionnaire, student perception questionnaire, interviews and reflective journals, the researcher's reflective notes and investigation of participants' writing samples during a period of 16 weeks (one semester). The research questions were classified into three categories: (a) students' academic profiles and needs analysis, (b) perceptions of *e4writing* and (c) assignments and tests findings. The questions were as follows:

Students' Academic Profiles and Needs Analysis:

RQ1. What were the "academic profiles" of the Korean university EFL students, and did these profiles have anything in common?

RQ2. How did the Korean university EFL students perform on the pre-writing test?

RQ3. What did Korean EFL university students view as their grammar difficulties with English writing?

RQ4. What did Korean EFL university students view as their vocabulary difficulties with English writing?

Perceptions of *e4writing*:

RQ5. What were Korean university EFL students' early perceptions of *e4writing* as a tool to enhance their grammar and vocabulary accuracy in English writing?

RQ6. What were Korean university EFL students' later perceptions of *e4writing* as a tool to enhance their grammar and vocabulary accuracy in English writing?

RQ7. Which aspects of *e4writing* did Korean university EFL students think were the most helpful and why?

RQ8. Which aspects did Korean university EFL students think were the least helpful and why?

RQ9. What suggestions did Korean university EFL students have for improving *e4writing*?

Performance on Assignments and Tests:

RQ10. What were the effects of *e4writing* on the overall accuracy of Korean university EFL students' writing assignments?

RQ11. What were the effects of *e4writing* on the overall accuracy of Korean university EFL students' writing tests?

In this chapter, I will provide (a) descriptions of needs analysis of the students, (b) the participants' overall early and later perceptions of *e4writing* and their suggestions for *e4writing*, (c) the effects of *e4writing* on the 12 students' performance on assignments and tests will be presented.

Students' Academic Profiles and Needs Analysis

In this section, the Korean EFL students' needs are identified based on the data from the background questionnaire, the transcripts from the first interview and the students' reflective journals. This section begins with the 12 students' "academic profiles" and a clustering of students into four general groups based on the information in these profiles. Then I present the following: (a) students' initial English proficiency, (b) their perceptions of initial difficulties with grammar and (c) their perceptions of initial difficulties with vocabulary.

Student Academic Profiles

Research Question 1. What were the "academic profiles" of the Korean university EFL students, and did these profiles have anything in common?

Here I present the "academic profiles" (in alphabetical order) of all 12 participants in the study. The data for the profiles were gathered through a background questionnaire, individual interviews, student reflective journals and the researcher's reflective notes. After the academic profiles of each student, I mention four groups formed by identifying similarities among the academic profiles.

Bo

Bo was a 30-year-old male student majoring in Education and English Education. He had already received a BA degree in English and then transferred to Silla University

in 2007. He wanted to become an English teacher. When he was studying for his BA in the Department of English, he lost some of his interest in English. However, after transferring, he started to enjoy English and experienced studying English in New York for one year from spring 2008 to winter 2008. It was hard at the beginning of his stay in New York, but he soon found himself enjoying studying English. He got used to using the language for listening, speaking and reading in an English-speaking environment.

The New York experience improved his English skills and brought him confidence in English. At the same time, he felt that his formal writing ability had not improved as much as other abilities, though he was confident about informal emailing and instant texting in English. The self-evaluation about his writing competence motivated him to learn how to improve his writing in terms of “formality” and “accuracy” and stimulated him to take both an intensive academic TOEFL course, including writing lessons, in New York and my writing course upon his return to Korea. He had more experience with academic English writing than the other students. He had difficulty both in vocabulary and in grammar but felt grammar was more difficult than vocabulary. He seemed to be a visual learner who liked to view the Statistic Log tables to obtain the big picture of what he was learning. During the course, he had to miss four of our class sessions due to student teaching.

Hye

Hye was 25 years old, a female senior student in Education, double majoring in English Education to become an English teacher. When she was 23, she internally transferred from History Education to the Education Department at the same college of education. Before transferring, she had no interest in English or in English Education.

She happened to make friends with English native speakers and started to become interested in English. This prompted her to decide to learn English in Canada for a year. The experience of learning English abroad led her to change her major and future job, giving up studying History and deciding to double major in English Education. Like Bo, Hye also showed her confidence in English and very positive attitudes toward countries where English is spoken as a native language and living in the places. Her confidence as well as her interest in English seemed to motivate her to more learn English and about English Education. In my casual discussions with her, she showed much interest in seeking a master's degree in the U.S.

When she was in Canada, she started to write in English, listing words without knowing English word order or grammatical structures well. She enjoyed practicing English writing through diaries and journals. She was the only student who did not translate Korean into English in writing and seemed to be accustomed to English writing. She said she did not like computers or Internet-based learning but preferred the traditional offline instruction and a pen-and-paper writing method. She seemed to be a reflective style learner who showed a tendency to weigh all the considerations in a problem before responding, and she had more concern about accuracy in English writing than fluency.

Hyun

Hyun was a 29-year-old female student in Japanese Education. She was a senior and had started to study English Education as a double major since the second semester of her junior year. She had the second highest TOEIC score (920) of the students. As this score indicates, her English proficiency in terms of listening, grammar, and reading was

above average. However, the first reflective journal and the first interview revealed that she felt difficulty with English writing and experienced anxiety over accuracy. She believed that facing anxiety over writing accuracy and constant practicing would help her to increase her level of writing proficiency. This was her primary reason to take my writing course.

Hyun's most difficulty with English writing was vocabulary. She showed low self-confidence in vocabulary during the first interview. Like Hye, she seemed to be a reflective student and did not like risk-taking, which also revealed that she was more care about accuracy rather than fluency. My reflective notes revealed that Hyun always sat back in the classroom during the course. She was quiet and never asked questions in class but seemed to be concentrating on the lessons. She was taking an English conversation course.

Jee

Jee was a 25-year-old male senior student who had just finished his 26-month military service. He was majoring in Education and double majoring in English Education to become an English teacher. He had studied English for seven years, focusing on grammar, reading and listening. He studied TOEIC test-taking in the army, and, although his highest TOEIC score was the second lowest among all the participants, he said that his TOEIC-studying experience was helpful for his English writing. He liked reading most and enjoyed solving reading-based questions. He showed low confidence, describing his current English writing as "kindergartener's writing," but was, perhaps paradoxically, very motivated to learn English. He mentioned that this writing course was advanced for him, but there were no other courses to learn English writing during the

semester. He thought that writing on a regular basis would help him to have more confidence in English writing and might help him to increase his TOEIC score. He felt grammar was difficult but vocabulary was even more difficult. His writing samples showed that his tendency of translating Korean into English caused him to write broken English.

Jin

Jin, 24 years old, was a female student in the Department of English Education. She had a B.A in History and transferred to Silla University in the spring 2009 as a junior to gain a teacher certificate, which is a basic requirement for the teacher employment examination.⁹ She did not double major like the other externally-transferring students. She took my course to improve her overall accuracy and fluency in writing. She was studying English listening, speaking, and writing by herself. She revealed very strong motivation, saying that she needed to reach a high writing proficiency level required to teach secondary students, and English writing was important in the teacher employment examination.

Jin experienced difficulty with vocabulary more than grammar in English writing. She exhibited confidence in grammar. She seemed to be an auditory learner who preferred to solve writing problems, especially vocabulary difficulties, through face-to-face communication.

⁹ In general, the English teacher employment examination in Korea is divided into two parts, the written test and the interview test. The written test covers general knowledge in education and specific knowledge in English teaching. After passing the written test, the prospective teachers must pass the interview test. However, parts of the examination vary depending on a city education policy in Korea. In Busan, there are three parts, the written test, English writing test, and then the interview.

Jung

Jung, 22 years old, was a female sophomore student. She internally transferred from Computer Education to English Education in the same college of education in the spring semester 2009. Since she was more interested in English education, she wanted to become an English teacher. She showed high confidence in grammatical knowledge. She said it was not difficult to find errors with the help of *e4writing*. However, it turned out that she made a lot of grammatical errors in her writing samples. Whereas she had positive attitudes toward English and had high integrative motivation to learn English, She displayed low motivation for this writing course, saying, "...honestly, I needed a course for my schedule". It seemed that she enjoyed learning English, but she was more interested in English speaking than English writing. Indeed, she mentioned that she wanted to "speak fluently" what she was thinking. Her long essays also demonstrated that she was more concerned about fluency than accuracy. In this sense, she seemed to an impulsive learner who was not afraid of taking risks. She did not match her impulsivity with the metacognitive urge to self-correct, so she made a considerable number of mistakes in her English writing.

Lia

Lia, 23 years old, was a female senior student majoring in Early Childhood Education and double majoring in English Education. She wanted to become either an English teacher or to work in a company. She had never learned English writing before and thought that "English writing was difficult." She also expressed fear about and low confidence in English writing. She self-evaluated her current English writing as "poor" and at a "beginner" level. On the other hand, she revealed a strong motivation to learn

English writing and write better in English by often asking me if she could do well in a writing course. She said that it took her a long time to brainstorm some ideas before writing. She felt that grammar was more difficult than vocabulary.

Min

Min, 25 years old, was a female senior student in History Education. However, History Education was not her interest, so she began double majoring in English Education in the fall semester of her sophomore year. She experienced English academic writing at the institute in which she usually learned English conversation and listening. Every weekend, she had a reading-discussion-writing class in which she read articles in the *Times* or in *Economics* magazine, discussed the reading, and then produced argumentative writing with one of the topics of the reading. Even so, she did not show much interest in English or English writing during the writing course. She said, “I just do [learn English] as everybody does”. It seemed that she was forced to learn rather than enjoy English.

She identified a lack of vocabulary knowledge as a barrier in English writing, while she was confident in grammar. Most of the participants usually solved their vocabulary difficulty by searching for words in a Korean-English dictionary, but Min did not like to depend on a dictionary and believed that vocabulary difficulty naturally occurred at a beginning level of English writing. She expected the difficulty would be solved as she learned. Like Bo, she had to miss four lessons for student teaching.

Sim

Sim was a 25-year-old female student who, as a junior, transferred to the Department of English education at Silla University to become an English teacher in the

spring 2009. She was a very enthusiastic student in my class. I provided two individual Q&A sessions during the course to let students freely ask me about the error feedback they received. Only a few of the students asked questions, but Sim excitedly participated in the Q&A sessions. Moreover, she often wanted to meet me after class to ask questions related to the lessons. She had participated in a one-year exchange program in a university in the U.S. from September 2007 to August 2008. Like Bo and Hye, who had experienced studying English abroad, Sim showed high confidence in English. She even wanted to write more than the eight writing assignments. Her active learning style, including passionate involvement in class activities, revealed that she preferred group work to individual work. She was also an intuitive learner, as seen in her long essay assignments. She was more interested in fluency than accuracy, as witnessed by the many spelling mistakes in her writing. She evaluated her English was not good enough because most courses in the Department of Education required accuracy. She thought her English writing definitely needed assistance to improve accuracy.

Sun

Sun was a 23-year-old female senior student in the Early Childhood Education Department. After realizing Early Childhood Education was not her interest, she started to double major in English Education. She wanted to become an English teacher either in a secondary school or a kindergarten. However, she vaguely thought she might take the English teacher employment examination or get a job in a private kindergarten without any examination. She thought her ambiguity about a career prevented her from motivating herself. While she was registering for courses in the spring 2009, she was advised by peers that the English writing course was one of the hardest courses provided

by the English Education Department and that she would not earn a good grade in the course. Nevertheless, she decided to take the writing course. She said in her first reflective journal that she had tried to learn how to write in English by searching for assistance at a private language institute and by studying English writing books published in Korea. Her attempts were not successful due to the high cost of assistance and the translation-based (Korean to English) writing books. Her biggest barrier in English writing was vocabulary. Her lack of vocabulary prevented her from creating well-formed English structures. She were very aware of her difficulties and her awareness of the grammatical and lexical difficulties led her have low self-confidence.

Yeon

Yeon, 32 years old, was a female student in English Education. She did not have a double major. She transferred to the department as a junior in the spring semester 2009 after working at a company for a long time. Her highest TOEIC score (990) was also the highest in the class. She revealed strong motivation to improve her English writing, because she believed that English writing was important for passing the teacher employment exam as well as for improving her linguistic abilities in English.

Her major concern was accuracy in writing. She had a low tolerance for mistakes and believed that she had to do her best so that they never occurred. This was one of the reasons she preferred a word processor in English writing that automatically suggested (or even corrected) misspellings, capital letter errors and punctuation errors. She believed she had to study harder than other students to catch up with them, and she felt that her efforts to avoid mechanical mistakes in English writing could be a way to overtake the other students. In this sense, she seemed to be a reflective writer. Fluency was her second

concern. She believed that simple short sentences seemed inadequate in academic writing and that more sophisticated sentences with compound or complex clauses were required to proceed to a higher level of English proficiency. This belief caused her to feel stress when writing and exacerbated her difficulty in accuracy when she was trying to make more sophisticated sentences. She also showed the tendency of visual learning, focusing on charts, tables, and systematic flows. She was impressed by the Statistic Log tables, so she created her own charts and graphs to track the progress in her English writing.

Young

Young was a 29-year-old, male senior student in Japanese Education, double majoring in English Education. He was the only one who did not have any interest in becoming an English teacher. He was interested in entering the stringed-instruments job market. He was first exposed to English through music, which tremendously influenced him for many years. He did not display motivation for improving academic English writing but instead showed motivation for communication with foreigners, whom he encountered in his workplace. His total length of study for English was 7.5 years. He did not like English and his highest TOEIC score (430) was the lowest among the participants' scores. While he was taking a basic English writing course in 2008, he went through a hard time due to his lack of grammatical and lexical knowledge. The unpleasant experience in English and English writing made him have low confidence and feel anxiety over English. Like Bo and Min, he had to miss four lessons for student teaching.

Four subgroups based on academic profiles

I then categorized each student into one of four subgroups based on information

from the academic profiles, specifically on confidence, motivation, personality, and experiences. Those groups were (a) the Confident Group, (b) the Unconfident Group, (c) the Instrumentally Motivated Group, and (d) the Indifferent Group. Although these four groups were not used for later analyses, classification into these groups reveals much about similarities and differences among the dozen students in the study.

The Confident Group (N=4). This group included Bo, Sim, Hye, and Jung. The first three of these four students shared English learning experiences, attitudes toward English, and personality traits. Students in this group had studied English abroad for one year. Due to this overseas experience, they were confident about English speaking and writing. They also had similar experiences abroad. They first felt excitement over their new surroundings, recognized cultural differences and language difficulties, and then became more familiar with the differences and moved slowly to progress in the language. They said they felt confident and recognized that they were proficient in English. They also had positive attitudes toward English and English learning, and their positive attitudes seemed to motivate them to learn more English. This group was actively involved in class activities.

Jung was included in this group, even though she had no experience studying abroad. She was confident about her English and English writing, had positive attitudes toward English and had high integrative motivation to learn English. At the end of the writing course, she informed me that she was selected to participate in a study abroad session in Australia.

The Unconfident Group (N=4). This group included Young, Jee, Sun, and Lia. Compared to the other three groups, whose members had abundant prior experiences with

learning English, this group included somewhat inexperienced learners with low TOEIC scores. This group repeatedly revealed feeling of uneasiness, self-doubt, anxiety, worry, or frustration. Members of this group also seemed reluctant to express ideas, were somewhat passive involved in class activities, and liked to stay safe, not trying new or unfamiliar patterns.

The Instrumentally Motivated Group (N=2). Instrumental motivation involves perception of practical value in learning the L2, with benefits such as a job, higher pay, or passing a required course (Saville-Troike, 2006). Members of this group were Jin and Yeon. These two students graduated from university and then transferred to Silla University to obtain an English teacher certificate, which students are required to have before they can take the teacher employment examination. In addition to a high GPA, the Department of English Education at Silla University required applicants to take two exams. One was an oral and reading English examination and the other was a subject-related examination. According to faculty in the department, the application process was highly competitive. This group of students was chosen through hard competition and seemed to have a very strong will to become English teachers in secondary school.

The Indifferent Group (N=2). This group included Hyun and Min. They were very reserved in class, always sitting at the back of the classroom. They did not reveal their feelings, interests, opinions or thoughts in much detail. These two students responded indifferently in the two interviews. Both had high scores in TOEIC and had experiences learning English at a private institute.

I have just presented the academic profiles of all 12 participants above and have suggested four groupings based on these profiles. In the next chapter I offer far more extensive case studies of four of the 12 students (Bo, Jin, Young, and Lia).

Overall Results for the 12 Participants in Terms of Initial English Proficiency

Research Question 2. How did the Korean university EFL students perform on the pre-writing test?

Even though the sample size of this study was small, I divided into the high and low accuracy groups. As mentioned earlier, since they had various educational backgrounds and experiences and *e4writing* was designed to provide individualized assistance to writers, in order to better understand individuals' needs and perceptions, it was important to know a level of proficiency of an individual learner in terms of accuracy. Data to address this question were collected from the pre-writing test, which was administered in class in the second week of the course. The participants were divided into two groups based on their English writing accuracy to reveal any differences in their difficulties with grammar and vocabulary, perceptions of *e4writing*, and their performance on assignments and tests.

The two groups were divided into high and low accuracy groups based on two criteria: error ratio and total words measured through the pretest. The error ratio was the primary category for dividing the groups. Sim was put into the high accuracy group (HA group afterward) even though her error ratio (28.4%) was slightly high in HA group. Her total words (282 words) indicated she was the top in total words in the two groups. On the other hand, Sun was placed into the low accuracy group (LA group afterward) as her total words (121 words) was the second lowest in the two groups although her error ratio

(28.9%) was almost same with Sim's. Therefore, the HA group included Hyun, Bo, Jin, Min, Sim, Yeon, and Hye. The LA group consisted of Jung, Young, Lia, Jee, and Sun. Table 4.1 gives information on their pretests in terms of total words, error ratio and holistic evaluation.

Table 4.1

Results on the Pretest in the HA and the LA groups

	Total Words	Error Frequency	Error Ratio (%)	TWE Score
HA Group				
Hyun	140	36	25.7	3.5
Bo	171	41	24	3.5
Jin	156	31	19.9	3.5
Min	171	32	18.7	3
Sim	282	80	28.4	3
Yeon	152	38	25.0	3
Hye	177	36	20.3	4.5
Group Average	178.4	42.0	23.1	3.4
LA Group				
Jung	144	59	41	3
Young	111	51	45.9	3
Lia	131	47	35.9	3
Jee	125	53	42.4	2.5
Sun	121	35	28.9	3
Group Average	126.4	49	38.8	2.9

Overall Perceptions of Initial Difficulties with Grammar

Research Question 3. What did Korean EFL university students view as their grammar difficulties with English writing?

The data for the overall perceptions of the 12 participants about their initial grammatical difficulties with English writing were gathered through the first interviews and the students' first reflective journals. In general, participants in the HA group felt they had difficulties with grammar less frequently than those in the LA group and thought fluency was more important than grammatical accuracy in English writing. On the other

hand, the participants in the LA group regarded grammar as a major barrier to writing in English.

For those who felt grammar was difficult, the most commonly mentioned reason was a lack of grammatical knowledge. In particular, Young, Lia, Jee and Sun in LA viewed the lack of grammatical knowledge as the source of their grammar difficulties. In addition, Young and Sun revealed low self-confidence in English writing due to their lack of knowledge of grammar. Young degraded his English writing skills by describing them as “trash”.

As written in my journal, it's not been a while since I was discharged from military service. Well, you can tell the time of military service is long. Actually, I have studied TOEIC in the army. Since I have focused on grammar and listening, I had self-confidence at least in grammar before going back to school. But I found the reality was quite different from what I had imagined. I'm not sure it (my grammatical knowledge) is correct. (Jee, first interview)

The reasons they thought they lacked grammatical knowledge for English writing included the following: The first reason was that their formal English education focused on reading more than writing. They believed that they were at a high reading proficiency level but that they did have enough knowledge of English grammar to write accurately and fluently. Moreover, few opportunities to write English in school made them think they lacked grammatical knowledge for English writing although they had been provided with grammar-focused English learning in secondary school. Lastly, the unfamiliarity of academic English writing caused them to think they lacked grammatical knowledge. Since the first reflective journals and the first interviews were conducted after the pretest and the writing assignment one, these academic English writing experiences could possibly cause most of the participants to think that their grammar knowledge was not enough to express and support their ideas.

The next biggest barrier in grammar difficulties was L1 interference. Yeon in HA group and Lia, Jee and Sun in LA group often focused on translating Korean into English in English writing. Their translation was used to compensate for their L2 linguistic deficiencies.

Yes, I feel difficulty, first of all, because English and Korean have different structures. Indeed, English writing is getting more difficult because I try to translate, to think in Korean first and then write in English. After writing, my output looks disconnected between sentences and different from what I originally intended. Now that I try to put Korean into English, my writing sounds awkward and unsystematic overall. (Yeon, first interview)

It was found that the less proficient L2 writers (Lia, Jee, and Sun) depended on their L1 more frequently than more the advance writer did (Yeon).

Lastly, discrete knowledge of grammar as one barrier to writing in English followed the lack of grammar knowledge and L1 interference. Bo, Sim and Lia revealed that their grammar knowledge was good enough on grammar tests and for reading but it was often insufficient for English writing.

I also have difficulties with grammar. I think I'm good at finding out and correcting errors in a sentence like a test but felt unsure how to apply what I know in writing. I tried to create sentences by using examples in a grammar book but still don't know how to utilize the grammar example sentences in writing. (Sim, first Journal)

Bo and Sim were the participant who revealed grammar difficulties with the HA group, even though they had more experiences in English writing than any other participants. Bo also felt anxiety when he failed to adequately apply his grammatical knowledge when writing in English.

On the other hand, the others in HA group felt they had few or no grammar difficulties. Sim, Jin, Min, Hye, and Hyun in HA group thought that grammar was important in English writing and reported that they were confident about writing in

English. For example, Min described her English writing as below:

I think my writing is easy for everyone to read. It's really easy. When we are asked to submit writing in the institute, others think too much, like, that they should use complicated sentences. They worry too much. I advise them to write in order that others can easily read, do not too much worry like that. And native speakers prefer clear and easy writing so I try to write as easily as anyone can understand. (first interview)

As seen in her description of her English writing, she said that she had little difficulty with grammar and vocabulary. Sim also stated that she had confidence in her grammar in the first interview. However, in her first reflective journal she reported that she had difficulty applying her knowledge of grammar to real writing. Sim's self-confidence originated from her strategy of using basic words and easy grammatical structures.

Overall Perceptions of Initial Difficulties with Vocabulary

Research Question 4. What did Korean EFL university students view as their vocabulary difficulties with English writing?

The overall perceptions of the participants with regard to English vocabulary are presented. As with grammar, the data for the overall perceptions were gathered through the first interviews and the students' first reflective journals. While some participants felt grammar was difficult, all felt that vocabulary was difficult. They even vocabulary was more difficult than grammar and regarded it as a significant barrier in their English writing.

Most of the participants, no matter what groups they were in, considered their lack of vocabulary to be a barrier to their writing in English. However, there was a notable difference between two groups. Jee, Young, Lia, Sun in the LA group thought they did not have essential vocabulary for academic writing.

When I was in the assignment the other day, I liked to sad about ‘future’ but couldn’t suddenly remember the word “future”. So, I used the other word, I couldn’t remember the word exactly...It’s always like that. That (word) was easy to remember once I memorize. Why don’t I...I can’t recall words that easily even easy ones. (Jee, first interview)

On the other hand, the participants in the HA group thought they had fundamental words for academic writing and were eager to study advanced words. Sim, Hye, Bo, Min, and Hyun in the HA group felt frustrated with using elementary lexical items repeatedly in their English writing due to their limited vocabulary skills.

Well, you know, my vocabulary is so basic and simple. As I wrote in my journal, I repeatedly use too many basic and easy words to irritate me. My English writing level is low because of this. You need to avoid repeated unnecessary words in English writing switching to synonyms and having a great command of words. That’s my weakness in my English writing. (Sim, first interview)

The participants viewed lexical choices between close synonyms as their vocabulary difficulty. For example, *task, job, duty, assignment, chore, exercise* all refer to a one-time piece of work, but which one to choose depends on the duration of the work, the commitment and the effort involved. Jin, Yeon, Hyun, Bo and Hye in the HA group wanted to acquire knowledge about the distinctions among close synonyms in order to express their desired nuances of meaning and to avoid unwanted implications.

The participants in both groups tended to rely on their native language for vocabulary. This tendency generated L1 interference and caused the participants to have more difficulties with vocabulary. Whereas the participants in the HA group tended to use synonyms and use contextual information to choose the right word, the LA students tended to depend on a Korean-English dictionary. When Jung, Lia, and Sun in the LA group had a lexical problem, they switched from their L1 into the L2 in a decontextualized way. It caused them to generate ungrammatical sentence structures in their writing including awkward or unclear sentences.

While I'm writing in English, I consult a Korean-English dictionary. I put a Korean word into the search box and then choose its corresponding English word. Substituting one to one seems to make my English writing nonsense, I mean, it can be broken English. (Jung, first Journal)

To summarize, all the students either majoring English education or double majoring revealed that they had difficulty with grammar and vocabulary in English writing in the beginning of the course. The two groups divided primarily based on error ratios of the pretest revealed different aspects of their difficulties. The HA group students generally felt that vocabulary were more difficult than grammar in English writing and wanted to acquire advanced vocabulary skills for English writing. On the other hand, the immediate difficulties of the students in the LA group were a lack of grammar knowledge and essential vocabulary to create a sentence in English writing. With the difficulties, they started to use *e4writing*. Their perceptions of *e4writing* during the course will be described the next section.

Perceptions of *e4writing*

This section presents the students' perceptions of *e4writing*. The transcripts from the interviews, the students' reflective journals, the student perception questionnaire and the researcher's reflective notes were analyzed. In this section, (a) early (two-week) perceptions of *e4writing*, (b) later perceptions of *e4writing* at the end of course, (c) perceptions of the most helpful aspects of *e4writing*, (d) perceptions of the least helpful aspects of *e4writing*, and (e) suggestions for improving *e4writing* are described.

Early (two-week) Perceptions of *e4writing*

*Research Question 5. What were Korean university EFL students' early perceptions of *e4writing* as a tool to enhance their grammar and vocabulary accuracy in English writing?*

The data for the students' early perceptions of *e4writing* were collected from the first interview, the students' first journals, and the researcher's reflective journal. Overall, the students showed positive attitudes toward *e4writing* at the beginning of the course. They expected that sharing the online essays would be the greatest benefit they could receive from *e4writing*. Their favorable response to the resource sharing was closely related to the fact that *e4writing* was created for Korean EFL students. The participants thought they could easily approach the online essays because they included common grammatical and lexical errors Korean students make. In addition, they were also positive about sharing essays as they could learn ideas, expressions, structures, and vocabulary from others' essays. The following excerpt is from the first journal.

First, I can access the essays comfortably because they are not perfectly written by professionals but written by students who are nearly equal to me in proficiency. I think this would help me reduce errors I may make by noticing the errors in their essays, and this would be a good opportunity to recognize my errors or mistakes I may easily overlook through their errors. (Min, first Journal)

The web space enabled them to readily share resources and to access *e4writing* at any time. The students felt that using *e4writing* was convenient as it was available whenever and wherever they wanted. Some students noted that *e4writing* was the only means of receiving error feedback on their English writing and believed *e4writing* could help them learn authentic English.

Teacher (T): Do you think the online essays in *e4writing* will help you improve your English writing in terms of accuracy?

Student (S): Yes, to some degree.

T: To what degree? How do you think it would help and how it wouldn't help?

S: Um.. First of all, there is no assistance I can receive. I mean, there is nowhere to give me feedback on my English writing. I think it's good that native speakers read and correct mine. (Hyun, first interview)

Some students mentioned that teacher-student interaction was useful in *e4writing*.

The interaction occurred as follows: when the students submitted their essays to

e4writing, the teacher downloaded them, made comments on them, and then the students shared the comments with their peers. The students expected that the teacher's online feedback would help them recognize and understand their syntactic and lexical errors. In addition, they thought they could receive assistance on accuracy in English writing from the supportive features of *e4writing*. Word Neighbor and the Grammar Guide were expected to help them understand their grammatical and lexical errors, and Practice was also anticipated to help them to figure out and correct errors.

However, not all students had a positive anticipation about *e4writing*. Hye showed her lack of comfort about sharing resources: she noted that the online feedback was inconvenient for her and she was unwilling to share her essays to another student. Hyun started to use *e4writing* with a somewhat skeptical view noting that it was insufficient for improving English since there was only grammar and vocabulary error feedback. Min showed a reserved view noting that *e4writing* might help if it was used in the long run. Bo, Jin, Jee, Jung, and Hyun stated that they felt that the editor might not fully understand what they intended to write. They thought that a few corrected sentences might change the initial intention. Bo and Sim mentioned that they were shocked at and felt depressed with the errors they made on the pretest after receiving the error feedback through *e4writing*.

Later Perceptions of e4writing at the End of the Course

Research Question 6. What were Korean university EFL students' later perceptions of e4writing as a tool to enhance their grammatical and vocabulary accuracy in English writing?

The data on the participants' later perceptions of *e4writing* were gathered through the second interview, the students' second journals, the researcher's reflective journal and the student perception questionnaire. While the responses to *e4writing* were brief at the beginning of the course, their responses were more detailed and varied at the end of the course.

Overall, most of the students stated that the online essays were beneficial for improving their in-class work. The participants noted that they referred to their peers' ideas, to how their peers began and ended their essays, and to how their peers expressed what they wanted to. Their anxiety over English writing was relieved by seeing their peers' online essays that included the same or similar errors as they made. Furthermore, they developed more confidence in English writing. They stated that they felt receiving the online error feedback reduced their errors.

Seeing the error feedback the other received about grammar and vocabulary, it was good that I could find out that they made the same errors as I did and gave me one more chance to identify the errors. I felt my initial anxiety of English writing gradually was decreased. (Sun, second Journal)

Changes...When the error feedback on my first essay came up the website, I felt frustrated after looking at the error underlines, the table to show how many errors there were. Oh, my god! What happened to my essay? But now, although my essays don't seem to be improved that much, actually I feel confident. I have self-confidence in my English writing and feel the number of my errors is getting less and less. It (*e4writing*) was really helpful. (Jee, second interview)

Furthermore, more students including Hyun who had a skeptical view toward *e4writing* at the beginning of the semester mentioned that they had used the website more than at the beginning as it was the only way to help them to reduce grammar and vocabulary errors and improve accuracy. The students noted that the individualized online pop-up feedback format of *e4writing* was a new experience, through which they received appropriate assistance for grammar and vocabulary. Most of the students viewed

the direct and indirect feedback on marked essays as the most effective features noting that they could gradually be able to correct their errors.

Teacher: They were helpful. Okay, how the feedback helped you with your English writing in terms of accuracy?

Student: Because it says what are incorrect, I can go back and correct the errors thinking that 'oh! this is what I did wrong.' Indeed, as written in my journal, we are revising one of the essays we wrote with the same topic during the class? I can see that they use similar expressions as I did in my essays and that they make similar errors as I did too. Seeing the similar errors, I ask my partner 'let's correct it to this' telling that 'I've got the feedback that we should use it like this' (Min, second interview)

The students showed positive attitudes toward the Grammar Guide, Practice, and the Statistic Log. They could increase their understanding about grammar errors through the Grammar Guide, their awareness of errors through Practice, and their susceptibility to errors through the Statistic Log. Nevertheless, it turned out that students thought *e4writing* was less beneficial for helping them improve vocabulary. This was because the indirect feedback easily delivered explanations about grammar, but it was difficult to convey explanations about vocabulary through the indirect feedback, except for spelling errors. In other words, it was not easy to explain why the word was inappropriate in a certain context via the pop-up window. Moreover, students received less benefit from Word Neighbor because it did not provide the nuances of words but rather the usage of words in essays.

Furthermore, most of the students noted that they were provided with practical assistance for grammar and vocabulary in English writing through *e4writing* and the assistance was more effective when they were offered offline instruction about grammar and vocabulary.

Teacher (T): We've been using the online essays since March, what changes do you think are there after using the website?

Student (S): I liked that I could identify the errors I make through the online feedback. I liked marked essays. What I really liked was that you taught grammar and vocabulary focusing our common errors on our essays. I could easily understand them through the lessons.

T: More clearly?

S: Yes. I still make errors though. I liked I could figure them out clearly.

T: You liked that you had chances to understand them correctly.

S: Yes. Whenever I write, there was something unsure, something unknown. I was happy with that the uncertainty was solved through the lessons. (Hyun, second interview)

While observing the students' use of *e4writing* and their essays, I realized that they needed extra instruction about vocabulary items that Korean EFL students easily confuse and therefore provided about 8 hour-long lessons. Sun, Jin, and Jung mentioned that the vocabulary instruction was helpful for improving their vocabulary.

Student (S): I actually think my accuracy is still poor. But the most help I got from this class was like replacing light verbs to specific verbs like 'have' to 'possess'.

Teacher: Word choice.

S: I liked that I could build more knowledge in the word choice. In fact, when I wrote before, I just could use the very basic ones like 'I am...' or a relative 'that'. Now I can use a variety of words, and I know what words I should use here, what phrases would be better, something like that. I feel my vocabulary is better than before. That (the instruction) was very helpful to me. (Min, second interview)

Students were more familiar with offline instruction. Due to the nature of the offline instruction, as information could be conveyed immediately and directly, students tended to place more reliability and authority on the offline instruction. The instructor's direct lecture enabled them to be passively involved in the instruction while the online assistance learning required more willing participation. They could be provided with more reliable information through the authority (instructor). Therefore, the offline instruction might maximize the effectiveness of *e4writing*.

Some students changed their views before and after the use of *e4writing*. Hyun changed her somewhat negative views of the website to a positive attitude at the end of

the course. On the contrary, Hye, who did not show reliance on the website and felt uncomfortable with it in the beginning, noted that she did not use *e4writing* other than for the pop-up feedback and felt anxious about receiving negative feedback. Like Hye, Bo felt lacked self-confidence, noting that negative feedback and the Statistic Log as an error list lessened his motivation to use *e4writing*. Sun and Jung first showed their activeness and enthusiasm toward *e4writing*, but as the course progressed by they felt disappointed that their busy school schedule prevented them from using the website as much as they wanted. Interestingly, all three male students mentioned the technical sides of *e4writing* and two of them (Jee and Bo) stated that they felt uncomfortable with the design of *e4writing* “because it looks like a foreign site”.

The participants’ overall positive attitudes toward *e4writing* presented from the interviews and the journals were identified through the student perception questionnaire as well (see Table 4.2). The participants reported the online essays were generally helpful as good resources (Mean=4.67, SD=.492). In particular, they referred to the marked essays more than the unmarked essays (Mean=4.67, SD=.492) and thought the marked essays helped them to improve their English writing (Mean=4.5, SD=.522) than the unmarked essays did (Mean=2.75, SD=.965).

The participants reported that their error awareness was increased. They paid more attention to grammar and vocabulary in their English writing than before (Mean=4.33). With regard to the assistance of *e4writing*, they reported the marked essays helped them increase grammatical accuracy (Mean= 4.0, SD=.603) and vocabulary accuracy (Mean=3.67, SD=.492).

Table 4.2

Overall Results for Later Perceptions of e4writing

	Statement	Mean	SD
Online Essays	Overall, the learner texts in <i>e4writing</i> were helpful for improving my in-class work.	4.42	.669
	The error-marked essays (i.e., essays clearly showing the errors) were helpful for improving my English writing.	4.50	.522
	The unmarked essays were helpful for improving my English writing.	2.75	.965
	In general, I paid more attention to the error-marked essays than unmarked-up essays.	4.67	.492
Grammar-Vocabulary Errors	I paid attention to grammatical errors in reading the error-marked essays.	3.92	.996
	I paid attention to word errors in reading the error-marked essays.	4.08	.793
Accuracy Awareness	After using the error-marked essays, I paid more careful attention to grammatical accuracy in my English writing than before.	4.33	.778
	After using the error marked essays, I paid more careful attention to vocabulary accuracy in my English writing than before.	4.33	.651
Assistance	The error-marked essays helped me increase accuracy in grammar in my English writing.	4.00	.603
	The error-marked essays helped me increase accuracy in vocabulary in my English writing.	3.67	.492
Supportive Features	The pop-up comments in the error-marked essays were helpful for figuring out what errors occurred.	4.25	.754
	The online concordancer in the pop-up comments in the error-marked essays helped me increase accuracy in vocabulary in my English writing.	3.58	.996
	The online grammar guide in the pop-up comments in the error-marked-up essays helped me increase accuracy in grammar in my English writing.	3.42	.996
Overall Evaluation	Overall, the learner texts were very useful resources for my English writing.	4.67	.492
Overall Mean and SD		4.04	0.729

Students' Perceptions of the Most Helpful Aspects of *e4writing*

Research Question 7. Which aspects of e4writing did Korean university EFL students think were the most helpful and why?

On the student perception questionnaire, the participants reported the following five aspects of *e4writing* as the most helpful features (see Table 4.3) and the second interview and the second reflective journal supported these findings.

Table 4.3

Top Five Most Helpful Aspects of e4writing

Rank	Aspects	# of Respondents (N=12)
1	Marked Online Essays	10
1	Direct Feedback	10
3	Pop-up Windows	8
4	Grammar Guide	7
5	Indirect Feedback	6

Most of the students (10 out of 12 students) reported that the most beneficial aspect of *e4writing* was the error-marked online essays. The students also reported that the essay enabled them to easily recognize the grammatical and lexical errors. In addition to this, the marked essays were open to anyone to read so that the students could easily evaluate the essays written by other students. Last, the students utilized the error-marked essays as an indicator that could of the level of their own essays.

Equally helpful was the direct feedback. The direct feedback included ‘correct Y’ ‘insert Z’ and ‘delete X.’ 80-three percent of the students (10 out of 12 students) reported that the direct feedback provided by the pop-up window was helpful for improving the accuracy of their essays. In other words, the direct feedback played a role of both “alerting” and “answering” which could reduce the possibility of error occurrences.

The pop-up windows were regarded as another helpful aspect for the students. The pop-up window provides detail information about errors (error category, indirect feedback, and direct feedback) when students mouse over the underlined errors in the marked essays. The students stated that they could have opportunities to think about why it was incorrect and what could be the correct answer before looking at the indirect feedback. The following is excerpted from the reflective journal.

When I read the marked essays, I liked that I could not see answers unless I mouse over around the errors. The pop-ups made me guess ‘why it was wrong’ and ‘what the corrected answers were’ before checking the error feedback. If the corrected answers were marked next to the errors, I might just see only the right answers without thinking about the error occurrence. (Sim, second journal)

The students made attempts to revise the underlined errors in the essays written by the other students through group, pair and individual activities. Moreover, some students mentioned that the pop-up window was good as it reduced their anxiety about the errors. While paper-based hand-written error feedback looks messy and a lot of error makers could easily demotivate them, the pop-up window could ease their anxiety about errors.

Oh, I like the pops because it doesn’t show the answers right away. You know, it could be stressful if you see all the things together in case that there are lots of errors. Now that the pops make me check one by one, it is easier to see the error feedback and it makes me feel more comfortable as well. (Yeon, second Interview)

The following helpful aspect of *e4writing* was the linked Grammar Guide. The Grammar Guide was linked to *e4writing* to provide more detailed information about grammar errors. For instance, an error in word order was linked to an English word order explanation with examples. Seven out of 12 students indicated that the Grammar Guide helped them further understand the errors and English grammar.

Last, the indirect feedback was the most helpful to the students in their English writing. The students reported that they could understand the errors through the indirect feedback before checking the error correction. For example, Sim regarded the indirect feedback as helpful. She had experienced receiving feedback on her written errors before the course. Once she was frustrated with the feedback since the native speaker she got the feedback from did not explain ‘why’ but instead said that ‘I’m a native speaker. You have to believe me. I already have an instinctive knowledge of English grammar....Oh, thank God because I’m Canadian!’”

Students’ Perception of Least Helpful Aspects of *e4writing*

Research Question 8. Which aspects of e4writing, did Korean university EFL students think were the least helpful and why?

The student perception questionnaire revealed that there were five aspects of *e4writing* regarded as unhelpful to the students as shown in Table 4.4: Board, unmarked essays, Practice, Word Neighbor, and Statistic log.

Table 4.4

Top Five Least Helpful Aspects of e4writing

Rank	Aspects	# of Respondents (N=12)
1	Board	11
2	Unmarked Online Essays	9
2	Practice	9
4	Word Neighbor	8
5	Statistic Log	6

The Board was regarded as the least helpful aspect of *e4writing* by 92% of the students (11 out of 12 students). The Board was created to provide for discussion but was never used by the students during the writing course. The main reason was that the

students and the teacher could fully discuss everything in class. The writing course had to officially use an online café offered by the university where this research was conducted. The Board in *e4writing* was not used since all the class materials were posted on the online café and all the people in the writing course communicated in class or via emails.

I haven't used the Board. Now that we were allowed to do the revision activities in class, it was better to talk with you during that time or to email you when I had questions. (an anonymous comment, Student Perception Questionnaire)

Moreover, it seemed that the participants did not utilize the Board for cultural reasons. Korean students tend to show passive attitudes in the classroom and feel shy to express their own ideas or opinions in public. This tendency seemed to influence on the participants' activity of the Board.

Student (S): The least helpful thing in *e4writing* was the Board. It hasn't launched and nobody used it rather it wasn't helpful. I've got into it to see who has written there.

Teacher: Why haven't you tried to use it?

S: Well, it was because of the crowds. Because nobody does it, I thought I shouldn't do that. (Jee, second interview)

The next unhelpful aspect of *e4writing* was the unmarked essays mentioned by nine out of the 12 students. The primary reason they reported was that they felt they were somewhat unnecessary as they fully acquired the same content from the marked essays. They also reported that the unmarked essays were hardly used as they had more interest in the marked essays that showed the content and errors at the same time.

Nine out of the 12 students regarded Practice as the third unhelpful aspect of *e4writing*. Practice was created to provide exercises in error correction under each grammar category based on the errors in the online essays. The limited amount of exercises was the most common reason why the students regarded Practice as the least helpful aspect. They reported that sixty-five sentences were not sufficient to help them to

improve their accuracy in English writing. Some students perceived that it was difficult to find and correct the sentence-based errors without underlined error markers.

Word Neighbor also was not very helpful to the students. Word Neighbor was a linked corpus website to provide more information about lexical errors. It was directly linked to the lexical errors and showed how the word was used in academic essays. However, the students felt using Word Neighbor was inconvenient as it did not provide instructions on how to use it. The other reason was that the students were unfamiliar with the corpus.

Last, six out of 12 students reported that the Statistic log was the least helpful aspect of *e4writing*. They thought the Statistic log was unnecessary, thinking that it was just a long error list. On the other hand, five out of 12 students reported that it was very beneficial as it provided an opportunity for them to notice what they lacked.

It [The Statistic Log] wasn't that helpful because I could see what errors I had without going down to see the error list. Indeed, I found what my common errors are so I don't think I need to see the list again. It's just statistical list. (Hyun, second interview)

The Log was very helpful to me. It was not like the comments I have usually seen from private editing. It provided very statistical and specific comments rather than overall comments. Adult learners who are beyond their critical period need to overcome the inference and the frame of L1 as soon as possible. The Log shows the frame of L1 I need to overcome. It is important to receive error feedback for every single error. However, time is limited to learn too many languages. The sooner you recognize your frame of L1, the more efficiently you can improve your writing. (Yeon, second Journal)

The second interview revealed different findings from those in the questionnaire. The students stated that the Board was the least helpful for their English writing (10 out of 12 responses) in the interview (same as the questionnaire). However, while the next least helpful feature was Unmarked essays in the questionnaire (nine out of 12 responses), the findings from the interview indicated that only two participants negatively responded

to Unmarked essays. These different findings were interpreted as follows: the participants were not provided with the list of *e4writing*'s 10 features (unmarked online essays, marked online essays, popup windows, direct feedback, indirect feedback, Word Neighbor, the Grammar Guide, Practice, the Board, and the Statistic Log) in the second interview. However, they were provided the list in the questionnaire. The list might have made the participants respond to the every single feature of *e4writing*. Therefore, the participants seemed to consider that unmarked essays were less helpful than marked essays as Table 4.3 indicates, rather than that unmarked essays were not helpful at all. The following excerpts from the questionnaire support this interpretation.

It's not that the unmarked essays were not helpful. Rather, now that I check the marked ones first, it is a bit inconvenient to go back to the unmarked essays. The contents were good but I don't like the system. (Anonymous, Student Perception Questionnaire)

Students' Suggestions for Improving *e4writing*

Research Question 9. What suggestions did Korean university EFL students have for improving e4writing?

At the end of semester, the participants were asked to suggest improvements for *e4writing*. Based on their experiences of *e4writing* over 16 weeks, the participants suggested enhancing the functionality of *e4writing*. Their suggestions were derived from their negative perspectives of *e4writing*.

The most frequent suggestion was Korean service. In particular, the LA group reported that they felt that it was difficult to understand explanations in English in the Grammar Guide. Apparently, the Grammar Guide provided them with some benefits to further understand about errors they made (see Table 4.3) but they thought they could have been assisted more if the Grammar Guide had been provided in Korean. They have

hardly been exposed to grammar explanations in English and were not familiar with the meta-language. They stated that they could barely understand the English grammar explanations. The participants also made suggestions about the amount of exercises in Practice. As mentioned earlier, the limited amount of exercises was not very helpful to their English writing (see Table 4.4). They asked for more exercises to be included and for Korean explanations to the exercises be provided.

With respect to the technical aspects, some participants proposed enhancing the functionality of *e4writing*. Some wanted to view the corrected online essays as well as the unmarked and marked essays and to view unmarked and marked versions of an online essay simultaneously or the unmarked and corrected versions of an online essay simultaneously in order to more easily compare the two versions. Some participants suggested including management functions such as a query function to search for their own essays or certain essay topics, and visualized statistical analyses in order to easily view the progress of their English writing.

Table 4.5 presents the results from the student perception questionnaire about *e4writing* in terms of website quality. The overall evaluation indicated that most participants were satisfied with *e4writing* (Mean=4.67); in particular the participants considered its contents to be helpful for their English writing (Mean=4.07). However, it seemed that *e4writing* did not provide efficient navigation and search functions. In addition, it seemed that the all English service of *e4writing* did not meet the needs of some participants who felt dissatisfied with indirect feedback and the Grammar Guide. With respect to the interactive features, as the participants did not use the Board at all throughout the course, *e4writing* did not seem to encourage them to discuss online.

However, as mentioned earlier, the unused Board was due to cultural and situational reasons. The average of the technical adequacy of *e4writing* was 3.58. In addition, the participants evaluated the appearance of *e4writing* as 3.53 on average.

Table 4.5

Evaluation of Quality of e4writing

	Statement	Mean	SD
Technical Adequacy	<i>e4writing</i> looks easy to navigate through.	2.83	1.030
	<i>e4writing</i> has adequate search facilities.	3.08	.793
	<i>e4writing</i> is always up and available.	4.33	.492
	<i>e4writing</i> has valid links (hyperlinks).	4.08	.669
	<i>e4writing</i> can be personalized or customized to meet your needs.	3.58	.515
	<i>e4writing</i> has many interactive features (e.g., comment and Q&A board).	2.92	.793
	<i>e4writing</i> is easy to access.	4.25	.622
	Mean	3.58	.702
Content Quality	The contents of <i>e4writing</i> are useful for general English writing.	4.42	.515
	The contents of <i>e4writing</i> are helpful for improving my in-class work.	4.58	.515
	The contents of <i>e4writing</i> are helpful for my accuracy in English writing.	4.08	.669
	I felt comfortable using the resources in <i>e4writing</i> .	3.83	.835
	The content of <i>e4writing</i> is complete.	3.42	.669
	Mean	4.07	.641
Appearance	<i>e4writing</i> looks attractive.	3.58	.900
	<i>e4writing</i> looks organized.	3.75	.866
	<i>e4writing</i> uses fonts properly.	3.25	1.055
	Mean	3.53	.940
Overall evaluation	I will probably continue using <i>e4writing</i> for improving accuracy in my English writing after this class is finished.	4.75	.452
	I would recommend <i>e4writing</i> to other students who want to improve their accuracy with English writing.	4.58	.669
	Mean	4.67	.561

To sum up, *e4writing* was a new experience to the students for the 16- week course. They revealed welcoming responses to the integration of the learner texts based on the same language background as theirs into the web space in the beginning of the

course. Their perceptions of *e4writing* and the learner corpus revealed in more details at the end of the course mentioning that it was beneficial for improving accuracy in English writing. Of the aspects of *e4writing*, the marked essays and the individualized direct feedback were the most helpful to their accuracy improvement but the Board was the least helpful. They evaluated that *e4writing* was generally satisfactory and suggested *e4writing* would provide a Korean service for the further enhancement of *e4writing*. How *e4writing* influenced their writing accuracy will be presented in the next section.

Performance on Assignments and Tests

This section presents the 12 students' performance on assignments and tests. I describe (a) the effects of *e4writing* on students' writing assessments and (b) the effects of *e4writing* on their tests.

The Effects of *e4writing* on Students' Writing Assignments in Terms of Accuracy

*Research Question 10. What were the effects of *e4writing* on the overall accuracy of Korean university EFL students' writing assignments?*

As described in the treatment in Chapter 3, the participants were asked to write eight assignments and take two tests on TWE topics. The participants were allowed to write the eight assignments out of class without a time limit, but take the tests in class within 30 minutes as *TWE* guides. Bo, Min, and Young did not complete all writing assignments due to the student teaching from May 4th, 2009 to May 29th, 2009 as mentioned in Chapter 3. Assignment six and seven were scheduled during the period.

Comparing assignment one to assignment eight, all the participants in both groups increased in terms of accuracy except for Hye (see Table 4.6). Hye did not submit assignment seven and eight and showed the gradual decrease in accuracy over her

assignments. She was absent from the class three times during the course for health reasons. The HA group showed a decrease 18.8% to 11.5% in their error ratio and the LA group also showed a decrease from 28.1% to 16.9% in their error ratio. In particular, in the HA group, Hyun, Jin, Min and Yeon demonstrated a notable decrease in errors while Bo and Sim showed a slight decrease.

Table 4.6

Results of Assignment One and Eight

	Assignment One			Assignment Eight		
	Total Words	Error Frequency	Error Ratio (%)	Total Words	Error Frequency	Error Ratio (%)
HA Group						
Hyun	89	26	29.2	301	28	9.30
Bo	195	43	22.1	188	39	20.7
Jin	213	23	10.8	332	11	3.3
Min	244	30	12.3	181	7	3.9
Sim	350	69	19.7	307	42	13.7
Yeon	179	54	30.2	177	12	6.8
Hye	200	15	7.5	203	46	22.7 ¹⁰
Group Average	210	37.1	18.8	241.3	26.4	11.5
LA Group						
Jung	194	67	34.5	301	71	23.6
Young	139	41	29.5	240	54	22.5
Lia	200	41	20.5	375	28	7.5
Jee	173	57	32.9	203	39	19.2
Sun	232	53	22.8	318	37	11.6
Group Average	187.6	51.8	28.1	287.4	45.8	16.9
Overall Average	200.7	43.3	22.7	260.5	34.5	13.7

Table 4.7 displays the average of total words, the error frequency, and the error ratio for the eight assignments. A difference between the HA group and the LA group was still found in their error ratios (14.9% and 21.6%, respectively).

¹⁰ This is the result of Hye's assignment six in terms of total words, error frequency, and error ratio.

Table 4.7

Average for Eight Assignments

HA Group	Total Words	Error Frequency	Error Ratio (%)
Hyun	198.1	35.8	18.0
Bo	227.2	52.2	23.1
Jin	260.4	24.8	9.5
Min	190.0	21.0	11
Sim	247.5	38.1	15.4
Yeon	168.3	24.1	14
Hye	224.2	29.5	13
Group Average	216.5	32.2	14.9
LA Group			
Jung	239.0	54.9	23
Young	156.0	37.1	24
Lia	250.1	35.8	15
Jee	169.6	45.1	27
Sun	209.8	38.4	19
Group Average	204.9	42.3	21.6
Overall Average	211.7	36.4	17.7

The Effects of e4writing on Students' Writing Tests in Terms of Accuracy

.Research Question 11. What were the effects e4writing on the overall accuracy of Korean university EFL students' writing tests?

The pretest was conducted in the second week of the study and the posttest in the 16th week of the study. Both tests were taken in the classroom during 30 minutes. As shown in Table 4.8, the participants showed the improvement in fluency (Mean=156.8 words to 174.3 words), accuracy (Mean=29.7% to 25.2%) and holistic scores (Mean=3.2 to 3.6). The HA group showed the improvement 6.9% in fluency (178.4 to 190.7), 6% in accuracy (23.1 to 21.7), and 5.9 % in overall scores (3.4 to 3.6).

The LA group also showed improvements. The total words increased 19.8% (126.4 to 151.4), the error ratio decreased 22.2% (38.8 to 30), and the *TWE* score increased 20.1% (2.9 to 3.5). Comparing the individuals' changes in each group, the

participants in the LA group demonstrated a greater increase in accuracy than the HA group. In the HA group, Hyun, Jin, Sim and Yeon showed a decrease in error ratio in the posttest while Bo, Min, and Hye showed an increase in error ratio in the posttest. In the LA group, all the participants demonstrated the decrease in error ratio in the posttest except for Sun.

The improvement of fluency in the tests might be caused by the fact that the participants wrote assignments on a regular basis over the course. In addition, as mentioned earlier, it should be noted that the offline writing course provided revision activities, which obviously encouraged the participants to be concerned about accuracy.

Table 4.8

Pretest and Posttest Results

	Pretest				Posttest			
	Total Words	Error Frequency	Error Ratio (%)	TWE Score	Total Words	Error Frequency	Error Ratio (%)	TWE Score
HA Group								
Hyun	140	36	25.7	3.5	114	27	23.7	3
Bo	171	41	24	3.5	199	53	26.6	3
Jin	156	31	19.9	3.5	199	34	17.1	4
Min	171	32	18.7	3	202	41	20.3	3
Sim	282	80	28.4	3	264	71	26.9	4.5
Yeon	152	38	25.0	3	196	24	12.2	4
Hye	177	36	20.3	4.5	161	40	24.8	4
Group Average	178.4	42.0	23.1	3.4	190.7	41.4	21.7	3.6
LA Group								
Jung	144	59	41	3	168	61	36.3	3.5
Young	111	51	45.9	3	122	32	26.2	3
Lia	131	47	35.9	3	155	30	19.4	4
Jee	125	53	42.4	2.5	168	39	23.2	3.5
Sun	121	35	28.9	3	144	65	45.1	3.5
Group Average	126.4	49	38.8	2.9	151.4	45.4	30	3.5
Overall Average	156.8	44.9	29.7	3.2	174.3	43.1	25.2	3.6

In short, since the students were allowed to write their assignments with various topics without a time limit, I cannot definitively state that their writing fluency increased. However, almost all of the students revealed an improvement in accuracy comparing the first assignment to the last over the writing course. In the pretest and posttest, the students apparently showed the improvement in accuracy, in particular those who in the LA groups.

Chapter Summary

This chapter presented the overall findings of 12 students' (a) academic profiles and needs for accuracy in grammar and vocabulary (b) perceptions of *e4writing* for grammar and vocabulary accuracy and (c) performance on writing assignments and tests.

The 12 students had widely varying educational backgrounds and experiences and showed the differences in confidence, motivation, and learning styles. For their needs for accuracy, the HA group students generally wanted to acquire advanced vocabulary skills than grammatical knowledge in English writing. On the other hand, the LA group students required both grammar knowledge and essential vocabulary to create sentences in English writing.

In terms of their perceptions of *e4writing*, the students' welcoming perceptions of the learner corpus and the *e4writing* website at the beginning of the course crystallized into the positive, specific responses to the marked essays and error feedback over the course. They also perceived that their attention to lexico-syntactic errors increased at the end of the course. It was also revealed that a couple of aspects of *e4writing* seemed to be less helpful to increase accuracy in their writing were suggested its improvement.

Lastly, the results of the assignments and the tests supported the students' statements that *e4writing* was beneficial to improve grammatical and lexical accuracy in actual writing performance.

CHAPTER 5

PHASE II: CASE STUDY FINDINGS

The previous chapter presented the 12 Korean EFL university students' academic profiles, their overall perceptions of their difficulties with English writing in terms of grammar and vocabulary, their overall perceptions about *e4writing* and the effects of a web-based data-driven writing assistance environment on their writing.

This chapter describes four participants' perspectives about their difficulties with regard to grammar and vocabulary and their experience with *e4writing*. The findings are presented with

descriptions based on the research questions. The findings were derived from sets of data collected from the background questionnaire, interviews, reflective journals, the researcher's reflective notes and the participants' writing samples during the 16-week writing course. As reiterated in Chapter 4, the research questions were classified into three categories: (1) student academic profiles and needs analysis, (2) perceptions of *e4writing* and (3) assignments and tests findings.

Student Academic Profiles and Needs Analysis:

RQ 1. What were the “academic profiles” of the Korean university EFL students, and did these profiles have anything in common?

RQ3. What did Korean EFL university students view as their grammar difficulties with English writing?

RQ4. What did Korean EFL university students view as their vocabulary difficulties with English writing?

Perceptions of *e4writing*:

RQ5. What were Korean university EFL students' early perceptions of *e4writing* as a tool to enhance their grammar and vocabulary accuracy in English writing?

RQ6. What were Korean university EFL students' later perceptions of *e4writing* as a tool to enhance their grammar and vocabulary accuracy in English writing?

RQ9. What suggestions did Korean university EFL students have for improving *e4writing*?

Performance on Assignments and Tests:

RQ10. What were the effects of *e4writing* on the overall accuracy of Korean university EFL students' writing assignments?

RQ11. What were the effects of *e4writing* on the overall accuracy of Korean university EFL students' writing tests?

In this chapter, I will illustrate four individual case studies regarding English difficulties and experience of *e4writing*: Bo and Jin in the HA group and Young and Lia in the LA group. Each case study includes (a) a needs analysis (b) the student's perceptions of *e4writing*, and (c) the student's performance on assignments and tests. Next, I will present a cross-case study that draws together the overall phenomena across the four cases.

For the individual case studies and the cross-case study, the qualitative data were transformed into numerical codes and were integrated with the quantitative data from the tests to provide a coherent picture of the students' perceptions.

Case Study 1: Bo

Student Academic Profile and Needs Analysis

Student academic profile

Bo was the student who showed the most enthusiasm about English learning among the four students throughout the writing course. Since not many Korean EFL students study English abroad, his experience of English learning in New York for a year seemed to give him self-confidence about himself as well as improved his English skills. His confidence was seen in his reflective journals. The first reflective journal was given to him to describe his English writing experiences and difficulties in the past. However, he described English writing in general more so than he did his own experiences. For example:

I regard English writing as the one which includes all parts in English. We input through listening and reading and output through speaking and writing. While speaking allows minimal mistakes, contractions and informality, writing emphasizes the feature of formality and requires accurate expressions. So, I think English writing is a final stage of English acquisition. (first reflective journal)

Another example of his confidence with English is seen in the following excerpt from his first reflective journal. He focused more on Korean EFL writers' difficulties than on his own difficulties.

Koreans' English writing seems to be grammatically accurate but awkward. In other words, their English writing seems to be translated from Korean and uses certain expressions which are not found in native speakers' writing. The difference between two writings can be found in English newspapers which convey the same contents. This is caused by the process which Korean English writers usually think in Korean first and then switch into English. This is also my major difficulty in my English writing and what I'd like to overcome. (first reflective journal)

He used the general statements such as "we" and "Koreans" for demonstrating his knowledge of English writing in the two excerpts above. In addition, he revealed his

knowledge of English writing stating that “the way of Korean student write is different from that of European students do. Korean students have their own common errors and European students have their own common errors” in his first journal and “I can tell Korean and Japanese students make similar errors (in English writing)” in his second journal. These observations seemed to have come from his English learning experiences in New York. His casual talks with me after class revealed that he felt proud of studying in the U.S. He often said “when I was in New York....,” “I have a friend in Maryland,” or somewhere else, and “Now that I experienced...”

Bo had more experience with academic English writing than the other students in my course. His experiences of studying English abroad helped him have positive attitudes toward English and English academic writing. He wrote in English for emails and Facebook and wrote in English once per week on average to communicate with his foreign friends through Facebook. The initial survey indicated that he liked English writing moderately well and the first interview showed that he tried to enjoy English writing. He struggled with English at the beginning of his studying in New York, but he soon found himself enjoying studying English. However, he thought that his writing ability had not improved as much as reading, listening and speaking. He took an intensive academic writing course in New York. He thought writing was the most difficult part for him since writing required formality, accuracy, and complexity more so than oral communication skills. The following excerpt from the first interview demonstrated his thoughts about English writing.

At first, it was listening skills I could acquire and then speaking skills to some extent, not fluently though, because the surrounding around me pushed me to use English. If not, I couldn't live, buy, nor do anything. And the next was reading and writing. Writing skills were the last ones I could acquire because I should

think and write accurately. Speaking and writing are different although you want to express the same idea. Even though you toss a word in speaking, they understand what you mean. But you need to articulate every word in writing to convey your intention. (first interview)

He was very aware of his English writing and his weaknesses in English writing. When he had difficulties using English grammar, he memorized grammar rules. In this sense, Bo was a learner who relied on memorization as a learning strategy and felt more comfortable following rules and standard procedures. As he placed too much emphasis on simple memorization, he seemed to have difficulty developing the critical thinking skills necessary for applying the rules of grammar to real life situations.

Bo noted that he could gain important insights about how to write by reading and studying a variety of types of text. As he believed reading helped with writing, he invested his time and energy reading. He enjoyed newspapers and news scripts after listening to news like CNN to obtain insights on formal English rhetorical conventions. He also noted in the first interview that he thought interesting novels could help him with his grammar and that he would be less anxious if he were more interested in English.

I think English literature will help my English writing. I'm reading Mark Twain again. I always try to approach to English with interest. Thinking that I have to do make me feel burden and lose my interest. So, I try to do what I like to do and find interesting in English. (first interview)

As seen in the above excerpt, he thought it was important to sustain his interest and motivation to continue learning English in the long term. The emphasis of sustaining his interest in English learning was also revealed through our casual talks. After the first interview, we had a small talk after class. I suggested that he read English newspaper articles more often than novels to help him improve his English academic writing, but he insisted on novels stating that reading news articles caused him to easily “lose [his] interest.”

Bo was a visual learner who preferred that information be presented visually in pictures, charts, or time lines. In the beginning of the course, he liked using the Statistic Log as he could have a glance at his errors in the Log. He attended to the Statistic Log tables and he revealed that the long error list contained therein negatively influenced him. In addition, he thought the visual layout of websites was important for drawing learners' attention and sustaining their interest. He also suggested that *e4writing* be made more visually appealing and that a "writers tracking" be included to monitor his own essays and progress.

Perceptions of initial difficulties in grammar

Bo thought grammar was important in his English writing. He stated that his English writing was poor because of his weaknesses with modal verbs, phrase verbs and prepositions. He noted that memorization was the best way of overcoming his difficulty.

There are a lot of kinds of grammar which I should know for English writing. If I do not understand it properly, English writing would be impossible. In my case, my most vulnerable parts are the use of modal verbs, phrasal verbs, and prepositions. I try to memorize modal verbs which have subtle differences in meaning. And also, I try to memorize phrasal verbs because I think they convey more accurate meaning in English writing. Whenever I have spare time, I try to memorize them but it's not easy. And I easily take mistakes in prepositions although I always try to memorize them. (first reflective journal)

On the one hand, he revealed somewhat high confidence in grammar saying that he knew English grammar well. His confidence about grammar seemed to be derived as mentioned early, from his extensive language learning experiences. On the other hand, he exhibited anxiety about grammar when he failed to apply his knowledge of grammar into writing. His book knowledge of grammar that was not applied to real-life writing situations exacerbated his writing anxiety as seen in the following excerpt.

I know what this (grammar) is but when I try to express something using this, actually when I am writing, I try to think what proper grammar to express what

I'd like to say is. After organizing the ideas I'd like to say, now that I too much focus on the grammar, the content sounds different from what I intended. When I review the writing later on, I realize that, oh, I should have used other grammar for this express. (first interview)

Perceptions of initial difficulties with vocabulary

He thought vocabulary was important in his English writing as well. He thought that he could write fluently in English if he had a good command of idioms and phrase verbs. To Bo, a good writer was one who could express himself or herself concisely and accurately using idiomatic expressions and phrasal verbs that native English speakers use. His ideal writer seemed to be influenced by English advanced oral communicators. However, while phrasal verbs or idiomatic expressions are very important for communication, they are not prevalent in academic formal writing.

Perceptions of e4writing

Early (second week) perceptions of e4writing

Before this course, Bo experienced receiving feedback on his English writing from English native speakers. They mostly returned his papers with his errors corrected in red pen. He noted that he was not satisfied enough with their feedback since the paper-based handwritten comments on his errors was often insufficient and unsystematic. Indeed, he sometimes felt like that 'the native speakers did not understand what I wanted to say'. This led him to feel confused and frustrated, and this caused him to neglect the comments. In the beginning of the course he discussed his high expectations of e4writing. This excerpt was from his first reflective journal:

I have been used many relevant websites and media for English reading, listening and reading but it is my first time trial to use a website for English writing. (first reflective journal)

Unlike the paper-based handwritten feedback that he had received, the interactive feature of *e4writing* attracted his attention. In other words, he expected an increase in motivation and an improvement of his English writing through writing, error marking, feedback, sharing with peers, and discussing essays on the board. The following was an excerpt from his first reflective journal.

It is great because it plays a role of distance learning which allows communicating interactively like offline. Students attach their essays and then receive feedback on them through the *e4writing*... I think this would improve effects of learning. (first reflective journal)

In addition, he liked the individualized features of *e4writing* focused completely on Korean EFL students. He viewed that writing in a foreign language was influenced to some extent by the linguistic and cultural conventions of the writer's L1, and this influenced the discourse patterns the writer used and the kinds of errors the writer made. These excerpts are from his first reflective journal and the first interview.

e4writing seems to help student improve on their frequent mistakes and errors by opening to the public and sharing with them the writing feedback the individuals receive. I guess it would maximize its advantages by focusing on only Korean students. (first reflective journal)

In terms of English writing, there are differences between Korean and Europe students. Korean students have common with mistakes and errors they make and European also make similar mistakes and errors in writing. So, I think *e4writing* would help Korean students due to its focusing on the students. I'm keep watching it.... (first interview)

Bo noted two more benefits Korean EFL students could gain from *e4writing* by sharing their writing. First, according to Bo, a student could notice and identify errors and mistakes that he or she might overlook while reading his or her own writing by comparing the unmarked and marked essays. He added that this identification of errors and mistakes could help the student reduce the frequency of errors.

Teacher: Um...then, do you think 'I shouldn't make this error' which the other student made reviewing the other students' writing on *e4writing*?

Bo: Yes, of course. But, I make the errors on my writing (Bo and I are laughing loudly), the exactly same errors. When I see uncorrected one, 'Uh?' I think 'this is correct.' But when I see corrected one, I realize that 'Oh I see! This is why it's incorrect.' (first interview)

Secondly, he said a student could assess his or her writing proficiency of his/her writing by comparing his/her own and his or own writing to others' writing.

Actually, it is a good thing to see other students' writing. I was wondering how *e4writing* scored the essays. I think I can guess where I am by comparing my scores with others' ones. I think this is important because it's essential to figure out your own level of proficiency. (first reflective journal)

Interestingly, he said he felt embarrassed after comparing his essay to others and noticing that he had many errors compared to them. This comparison influenced his activity in the *e4writing* the Boards. The Board displays students' IDs that they created for the *e4writing* course. From the beginning of the course, he revealed no interest in the Board and was reluctant to participate on the Board. On the other hand, he demonstrated a positive attitude toward Practice in *e4writing*. He liked it because he could be provided an opportunity to check and improve his weaknesses in grammar by correcting errors under each grammar category.

Teacher (T): There is another feature, Practice, in *e4writing*.

Bo (B): Oh, is that correcting? I tried it. I tried the 'Articles' part but I couldn't do well. So, I started to learn 'articles' again. But, you know, now that I studied it with a grammar book, it was the same as I already knew.

T: You mean you already have that knowledge.

B: Yes, but I do wrong whenever I try to correct them. I've kept doing it but it wasn't improved yet. (first interview)

Although Bo had a very positive attitude toward online essays and *e4writing* at the beginning of the course, he felt shocked when he received his first feedback on his writing. As mentioned above, he had confidence in his grammar, which was developed by his previous English study. However, he received error corrections about grammar he

thought he already knew and he felt frustrated with that. This was an excerpt from the first interview.

I thought first it wasn't mine. (laughs). How did I write it like this? It had too many redundancies and missed what I had to write. Anyhow, it had too many errors. I used Articles incorrectly, that is a basic though. Even though I've kept learning English with my best, I did so. It would be better that I slipped up in grammar parts that I didn't know. I've tried....I got shocked with the errors.
(first interview)

Despite his frustration with the first writing error feedback, he did not seem to be demotivated. He was asked whether *e4writing* helped with accuracy in writing. While Jin, Young, and Lia gave positive responses, Bo deferred his decision. His reserved decision seemed to be related to that he showed more positive responses than the others but no negative responses in the beginning. He seemed to welcome *e4writing* but seemed cautious about the effectiveness of *e4writing*.

Positive perceptions of e4writing at the end of the course

Overall, Bo was critical towards *e4writing* at the end of the writing course while he was receptive to *e4writing* at the beginning of the course. With many experiences of online English learning, he provided his general evaluation about *e4writing* through the second reflective journal and interview.

He was very familiar with up-to-date technology. He mentioned that one of the most attractive aspects of *e4writing* was that it was accessible 24/7. He said that he could access the website whenever he needed and could use it when writing, submitting, receiving feedback, learning, and practicing. He noted that *e4writing* was “innovative,” allowing writers to experience this whole process and this distinguished it from the traditional writing method. In addition, he positively evaluated the “innovative” error feedback system of *e4writing*, which was also different from the conventional red-pen

error feedback he had received. Bo was satisfied with the *e4writing* error feedback that provided him with crucial assistance in English writing. He was additionally satisfied with the mouse-over pop-up feedback system enabled that easy noticing.

I think *e4writing* efficiently shows the characteristic of online. Offline instruction can be one-shot treatment, but online enables us to access whenever I want, is available round the clock. It is like an exclusive writing course which includes everything in an offline course. I mean, it is divided by several parts, categories; submitting, viewing, and practicing. I can use anything whatever I need. That's a great help. (second interview)

The second aspect that was appealing to Bo was the easy sharing of English writing materials. The second interview revealed that he spent time reading other students' writing focusing on a variety of ideas, grammar structures, and vocabulary used in their writing. He reported he had learned a lot from them since he believed that imitation was an important component of language learning.

With assistance of *e4writing* and his continued effort, he felt that his English writing errors he often made were steadily decreasing and his English writing was improving, although not markedly. In terms of vocabulary and grammar, Bo thought *e4writing* had contributed to his improvement in grammar more so than vocabulary.

As I said earlier, the errors I sometime make won't be removed, but for such parts as articles I think the errors are decreasing. I feel like that they are seemingly decreasing, not much, when I got the essay feedback. That's what I think. (second interview)

He stated that the time limit prevented him from paying much attention to avoiding errors in writing but *e4writing* helped remind him of the error feedback on his writing assignments. The researcher's reflective notes revealed, for instance, that throughout the entire the writing course, his writing assignments showed that he was confused with the use of demonstrative pronouns such as *this*, *that*, and *it* as with many other students in the course. The lessons about the use of demonstrative pronouns in

English writing were provided and the students were asked to correct errors with demonstrative pronouns either as a group or individually. Bo initially showed little attention to the pronoun correction work in class; however, after receiving error feedback on pronouns, he became more concerned about them and tried to understand why a certain pronoun was supposed to be used in a certain context.

Yes, I'm still making errors. Surely, I do. But, I'm very careful when writing. I used to write without much caution as I had to do within not much time. But now, I'm paying careful attention to if this is correct while I'm writing. Actually, the articles you mentioned in class was paid my full attention. (second interview)

Bo reported the most beneficial aspect of *e4writing* was the direct and indirect feedback through pop-up windows, which allowed him to see the errors he made and learn about the correct forms. He mentioned that the feedback he received before this writing course was not very helpful since the feedback was in the form of underlined error marking and the correct form next to the errors. These barely "remained in his mind" as time passed and did not help him to persistently avoid making the same errors.

His reflective journal disclosed that he felt that it might not be easy for the editors to provide both direct and indirect error feedback. He felt the efforts of the editors contributed to his retention.

I have received error feedback in other way but the feedback did not give me any other explanation. So, *e4writing* is really appealing to me as it gives me underlining error marks and tells me why the errors are wrong. Popup windows in marked essays, one of the *e4writing* features, provides me corrected answers and, unlike the traditional offline feedback with red-pen, helps me review my weakness through dictionary and the Grammar Guide which provide further explanations. Adding and deleting words and articles, correcting awkward expressions and such. Whenever I read the feedback, I feel the editor must have read my essays again and again to understand what I wanted to say and to give me effective feedback. That's tremendous work. (second reflective journal)

Negative perceptions of e4writing at the end of the course

Bo had some reservations about *e4writing*, and in particular about the Statistic Log and Word Neighbor. The researcher's reflective notes revealed that as time passed, his enthusiasm began to drop noticeably. In the beginning of the course, he stated that the Statistic Log's list of error categories and error frequencies helped him avoid repeating the same errors. However, at the end of the course, he was highly discouraged that he was still making the same errors and a lot of errors, stating that the long, overwhelming error list made him feel disheartened.

Bo (B): You know, the Statistic table. It has a lot of categories. I think the category would be better to be divided by a larger chunk. It has a lot. Every error feedback essay has a long list enumerates statistical figures. Minus, minus...I think it needs to have broader categories. It has, you know, too many categories. In some ways, the long list easily makes me lose my confidence.

Teacher: Do you feel that you have had too many negative feedback?

B: Yes. I did my best to write with carefulness. Actually, the feedback was. You can give advice, like 'this is good but...' or 'you did good job in this part, but why don't you correct it in this way?' even if when you give negative feedback. You know, you wouldn't feel bad if people say that like that. Positive comments will motivate students. In fact, English writing is hard. (second interview)

He believed that too much attention to his own errors prevented him from improving in English and gave him stress. The following is excerpted from the second interview.

Bo (B): I like View as I can read others' essays with the same topic thinking that oh, she wrote it in this way.

Teacher (T): You mean you get some ideas from them?

B: Yes.

T: What about grammar or vocabulary on their essays?

B: Of course, I refer to them. Sure, I do. I'm thinking that he wrote this with this idea, I wrote this in that way. I believe imitation makes you improve your English. English writing, too. English writing improvement should be done by comparing theirs and mine and reviewing my errors together. If I keep focusing on my errors, this is going to be stress to me. I learn from their essays thinking that mind is better than hers or his one is better than mine. (second interview)

His negative attitudes were also influenced by the fact that *e4writing* was only in English. He thought *e4writing* was not appropriate for beginners who have difficulty understanding English feedback. In addition to this, he stated that the layout of *e4writing* was ‘too Americanized’ which looked somewhat “boring”. He did not feel comfortable with *e4writing* in English and in an American style.

In case of grammar explanations, as I said before, for the errors Korean commonly make such as determiners, the explanations should be in Korean. I think *e4writing* would be easy to use for people who have a good command of English. But, for beginners, it is difficult a bit. To be honest, it looked like an American website. Korean websites contain attractive visual graphics, popping up here and there. You know, promotion is important. It needs something audiovisual to easily draw people’s attention. Of course, people will use it although it takes time to translate English on *e4writing*. But, you know, it’s sort of boring. I mean, if it was more interesting, it might encourage me to write well. Uninteresting. It looks too Americanized. (second interview)

Another negative attitude was about Word Neighbor that allows students to refer to an academic corpus. As mentioned in the overall analysis above, most students had difficulty using it due to the lack of instructions on how to use it. Indeed, the unfamiliarity of the corpus, compared to online dictionaries Korean websites provide, caused him to think *e4writing* looked somewhat “unprofessional”. The researcher’s reflective notes revealed that as time passed, his enthusiasm began to drop noticeably.

He added that *e4writing* could be a successful business if it was available to Chinese and Japanese learners who were interested in taking TWE tests, not limited to Korean students. The second interview revealed that he had a misperception that *e4writing* had been developed for commercial use. This was because he missed the initial lesson about *e4writing* where it was stated that it was to be used for research.

Suggestions for improving e4writing

As mentioned above in the overall analysis, the students' suggestions were drawn from their experiences of *e4writing*, in particular from their negative perspectives of *e4writing*. Bo's suggestions are also derived from his experience of *e4writing* throughout the writing course. He suggested that *e4writing* could provide positive comments on essays to increase students' motivation. In addition, as too long a list in the Statistic Log might make writers feel anxious, merging error categories in the Log was suggested.

Bo thought Practice was helpful to him as it played a role of assessing his weaknesses. At the same time, he stated that it would give more beneficial to writers if it had more questions and was regularly updated. Bo obviously felt that it was inconvenient to review the original essay in order to obtain further explanations. Hence, he also suggested that if it provided explanations with answers, the writer would not have to see the explanations on the original essays. However, Practice was developed to encourage students to look at errors in context as well as to find out errors and correct them.

The other suggestion made by Bo was to provide Korean explanations in the feedback to help Korean novices completely understand the feedback. Although feedback (both direct and indirect) had neither long nor difficult descriptions, his suggestion as well as his negative views towards *e4writing* suggests that he might not be comfortable with English learning websites.

In terms of the technical aspects of *e4writing*, Bo suggested improvements to the layout of *e4writing*. He thought if it had a better layout, writers might pay more attention to it. Also, he stated in his journal that it should provide a profile of the editors. Lastly, he suggested that if it added a feature to manage his account in *e4writing*, such as showing

his own essays and his own error statistic log, he could easily see his progress.

Performance on Assignments and Tests

The effects of e4writing on writing assignments

Bo believed that he had to keep trying to improve his English writing although it took a long time for him to do so. He noted that writing practice, including prewriting, drafting, and revising, was necessary to improve his English writing. During the revision activities in class, Bo did not lead the group or pair activities but was willing to be a presenter when his group had to explain what errors they made, why they were wrong, and how to correct them. He presented this information with confidence. However, during the individual revision activities employed at the end of the writing course, he was largely silent. This suggests that the error feedback through *e4writing* gradually lowered his confidence as the course continued.

For the writing assignments, Bo said he tried to write them within 30 minutes as the TWE guidelines require. As mentioned in Chapter 3, Bo missed two assignments (six and seven) due to his student teaching. In general, his six assignments shown Table 5.1 indicated that he did not perform as well as the others in the HA; rather it was closer to the LA group students (see Table 4.7). His overall writing performance on his assignments is presented below.

Table 5.1

Results of Writing Assignments of Bo

Assignment	Total Words	Errors	Error ratio (%)
1	195	43	22.1
2	234	62	26.5
3	297	52	17.5
4	216	52	24.1
5	233	65	27.9
8	188	39	20.7
Average	227.2	52.2	23.1

Assignments one through five were submitted before his student teaching and assignment eight was written after his student teaching. As seen in Figure 5.1, except assignment three, the number of errors increased as the total words increased.

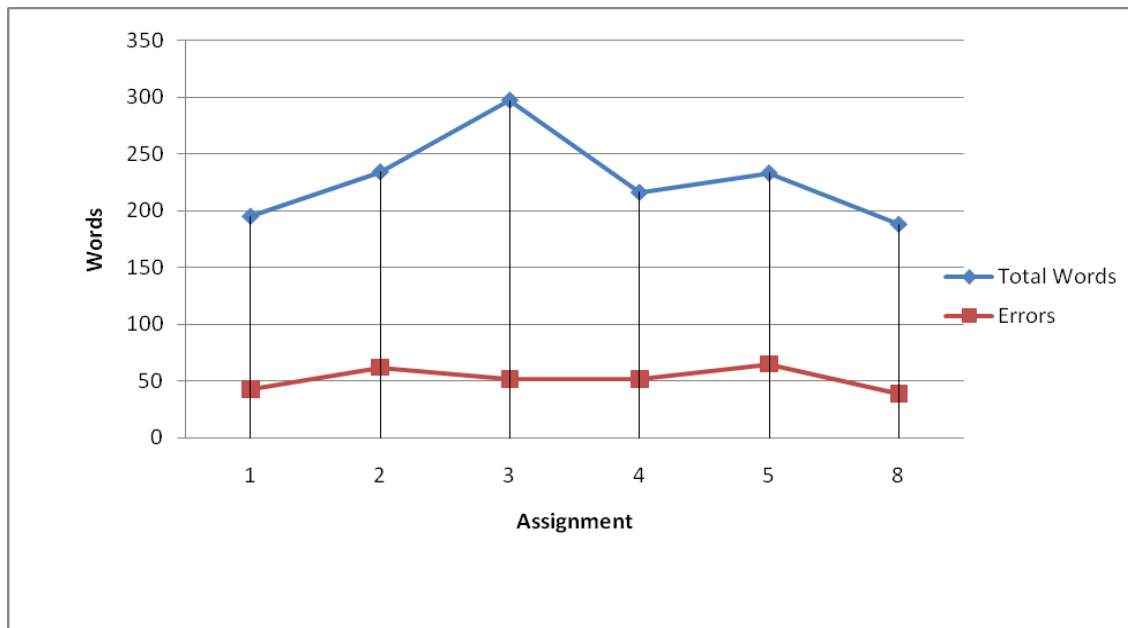


Figure 5.1. Changes in Bo's assignments.

Considering the average error ratio of assignment 3 was 13.8%, all the students felt the assignment was easier than the other assignments. However, it was noted that Bo's performance in assignment 3 was higher (17.5%) than the average. In addition, as shown in Table 4.7, his overall accuracy in writing (23.13% error ratio) in all the

assignments was above the average of the LA group (21.6% error ratio) in the assignments.

According to Bo, the error feedback helped increase his awareness of errors. However, it appeared that his assignments did not improve as much as his awareness increased. As seen in Figure 5.2, he incorrectly used “what” in the sentence “They are doing things what they do not want and enjoy.” He mentioned that he did not pay his attention to the use of the relative pronoun “what” while he was doing the assignment because he attended to the content of the essay.

For example, there is someone who wants to be a teacher, but they do not have money and time to study. They have to make money to live. They are doing things what they do not want and enjoy. That is not avoidable. Although they complain the problems, they cannot afford to stop doing what they do not want to do.

Figure 5.2. A passage from Bo’s first assignment.

Bo expressed frustration with the first assignment, saying that although he paid his attention to the errors he made before, he made the same error with the relative pronoun, “what” in the last phrase “but we can choose what the one is suitable” in the eighth assignment as seen in figure 5.3.

On the other hand, living in apartments also has advantages. First, students can make same place like their home. They need time to adopt new life but similar things or arrangements make them to do easier.

Second, rules are not strict than dormitories. As we know, dormitories have many strict rules to live together but there are some and flexible rules in apartments.

And last, students can learn how to live alone. They live an independent life as living alone. They are going to be part of society naturally.

People cannot say what is the best thing whether to live in dormitories or apartments but we can choose what the one is suitable.

Figure 5.3. Passages from Bo’s eighth assignment.

The effects of e4writing on writing tests

Table 5.2 presents Bo's achievement on the two tests. The number of total words in the pretest was 171, the error ratio was 24% and the TWE score was 3.5. In the posttest, the number of words was 199, the error ratio was 26.6% and the TWE score was 3. These results provide evidence that his English has improved in fluency but decreased in overall quality and accuracy. Fluency improved by 16.4 % (171 words to 199 words), and accuracy decreased by 10.8% (24% to 26.6%). The error ratios in the two tests were comparable to those in the assignments. The results in the pretest indicated that he was slightly superior to the students' overall performance (the average number of words was 156.8, the error ratio was 29.7%, and the TWE score was 3.2, see Table 4.8). However, the results in the posttest indicated that he did not improved as much as the others in the HA group and his accuracy did not meet the overall average (25.2%) in error ratio (see Table 4.8).

Table 5.2

Results of the Pretest and Posttest for Bo

Test	Total Words	Error Frequency	Error Ratio (%)	TWE Score
Pretest	171	41	24	3.5
Posttest	199	53	26.6	3

Although he did not demonstrate improvement in accuracy from the pretest to the posttest, e4writing seemed to help him have less anxiety about English writing. Figure 5.4 presents his essays from the tests. On his handwritten pretest, there were traces of erased words, which showed how anxious he was on the writing test. During the first interview, Bo also revealed that he was too nervous to appropriately apply grammatical rules on the pretest. On the other hand, the tidiness of his posttest essay is evidence that

he felt less anxious and kept writing without hesitation for 30 minutes. He commented during the first interview that the use of the online essays for three months enabled him to “unconsciously acquire” and “remember” rules for written English. Bo also believed that it was important not only that he showed visible improvement in accuracy but also that he was learning.

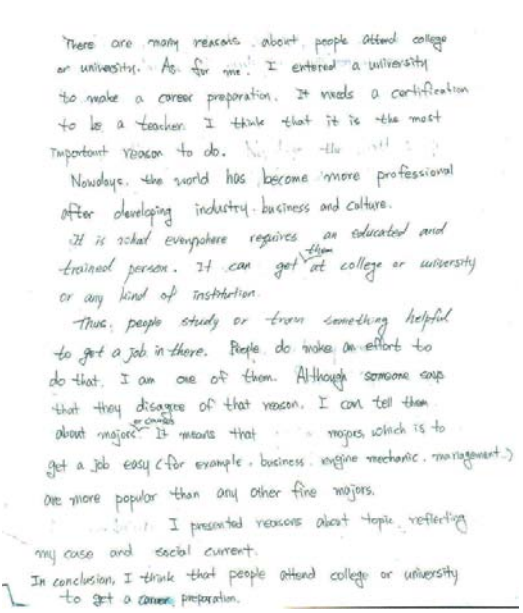
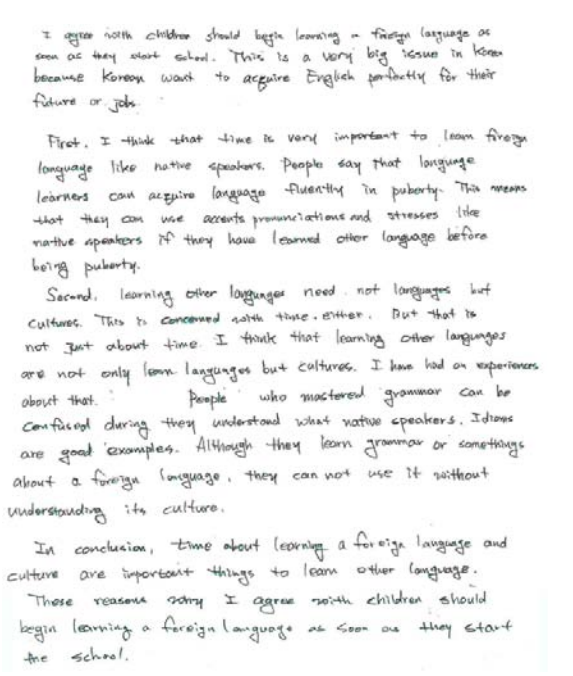


 <p>There are many reasons about people attend college or university. As for me, I entered a university to make a career preparation. It needs a certification to be a teacher. I think that it is the most important reason to do.</p> <p>Nowdays, the world has become more professional after developing industry, business and culture. It is what everywhere requires an educated and trained person. It can get them college or university or any kind of institution.</p> <p>Thus, people study or learn something helpful to get a job in there. People do make an effort to do that. I am one of them. Although someone says that they disagree of that reason, I can tell them about major. It means that majors which is to get a job easy (for example, business, engine mechanic, management...) are more popular than any other fine majors.</p> <p>I presented reasons about topic reflecting my case and social current.</p> <p>In conclusion, I think that people attend college or university to get a career preparation.</p>	 <p>I agree with children should begin learning a foreign language as soon as they start school. This is a very big issue in Korea because Korean want to acquire English perfectly for their future or job.</p> <p>First, I think that time is very important to learn foreign language like native speakers. People say that language learners can acquire language fluently in puberty. This means that they can use accents pronunciations and stresses like native speakers if they have learned other language before being puberty.</p> <p>Second, learning other languages need not languages but cultures. This is concerned with time, either. But that is not just about time. I think that learning other languages are not only learn languages but cultures. I have had an experiences about that. People who mastered grammar can be confused during they understand what native speakers. Idioms are good examples. Although they learn grammar or somethings about a foreign language, they can not use it without understanding its culture.</p> <p>In conclusion, time about learning a foreign language and culture are important things to learn other language.</p> <p>These reasons why I agree with children should begin learning a foreign language as soon as they start the school.</p>
 <p>e4writing Data-Driven Interactive Writing Environment</p> <p>HOME SUBMIT VIEW PRACTICE BOARD LOGOUT</p> <p>Essay ID: 96 Essay Topic: People attend college or university for many different reasons (for example, new experiences, career preparation, increased knowledge). Why do you think people attend college or university? Use specific reasons and examples to support your answer.</p> <p>There are many reasons about people attend college or university. As for me, I entered a university to make a career preparation. It needs a certification to be a teacher. I think that it is the most important reason to do.</p> <p>Nowdays, the world has become more professional after developing industry, business and culture. It is what everywhere requires an educated and trained person. It can be them at college or university or any kind of institution.</p> <p>Thus, people study or train something helpful to get a job in there. People do make an effort to do that. I am one of them. Although someone says that they disagree of that reason, I can tell them about majors or courses. It means that majors majors, which is to get a job easy (for example, business, engine mechanic, management...) are more popular than any other fine majors.</p> <p>Missing Preposition! Insert "to"</p> <p>Click here for more advice and practice.</p> <p>MARK: -1</p>	 <p>e4writing Data-Driven Interactive Writing Environment</p> <p>HOME SUBMIT VIEW PRACTICE BOARD LOGOUT</p> <p>Essay ID: 153 Essay Topic: Do you agree or disagree with the following statement? Children should begin learning a foreign language as soon as they start school. Use specific reasons and examples to support your position.</p> <p>I agree with children should begin learning a foreign language as soon as they start school. This is a very big issue in Korea because Korean want to acquire English perfectly for their future or job.</p> <p>First, I think that time is very important to learn foreign language like native speakers. People say that language learners can acquire language fluently in puberty. This means that they can use accents pronunciations and stresses like native speakers if they have learned other language before being puberty.</p> <p>Redundant "there BE"! Avoid beginning sentences and clauses with "there is/are/was/were". Delete "being". Click here for more advice and practice.</p> <p>Second, learning other languages need not languages but cultures. This is concerned with time, either. But that is not just about time. I think that learning other languages are not only learn languages but cultures. I have had an experiences about that. People who mastered grammar can be confused during they understand what native speakers. Idioms are good examples. Although they learn grammar or somethings about a foreign language, they can not use it without understanding its culture.</p> <p>In conclusion, time about learning a foreign language and culture are important things to learn other language. These reasons why I agree with children should begin learning a foreign language as soon as they start the school.</p>

Figure 5.4. Bo's essays from the pretest and posttest.

Overall Results from Qualitative and Quantitative Analysis

The qualitative data was converted into numerical codes to create a single comprehensive dataset. The approaches to quantizing qualitative data included enumerating the frequency of themes within one student's data and the percentage of themes associated within a given category for each respondent. These quantized data displayed emergent themes and their relations. Figure 5.5 displays the frequencies of Bo's overall pre-and-post responses toward *e4writing* before and after the writing course.

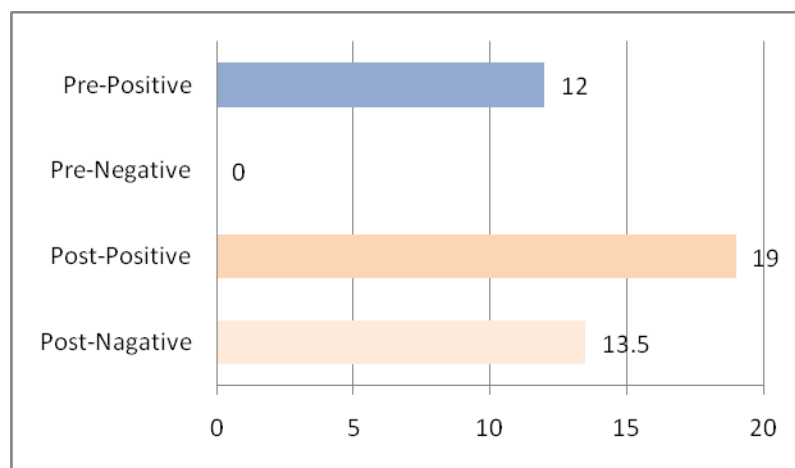


Figure 5.5. Bo's overall pre-and-post response frequency toward *e4writing*.

As seen in Figure 5.5, his positive perspectives toward *e4writing* (Frequency=12) saw a 36.8% increase (Frequency=19) in his final reports. While he did not reveal any negative attitudes towards it in the beginning, his negative attitudes at the end of the course, 13.5, made up 41.5% of the total negative post responses (frequency=32.5). Figure 5.6 shows the percentage of his negative attitudes related to *e4writing* experiences. Of his negative responses at the end of the course, 22% of his responses dealt with his depression over the negative comments he received. However, he did not show answer negatively to the question of whether *e4writing* helped him increase grammatical or lexical accuracy.

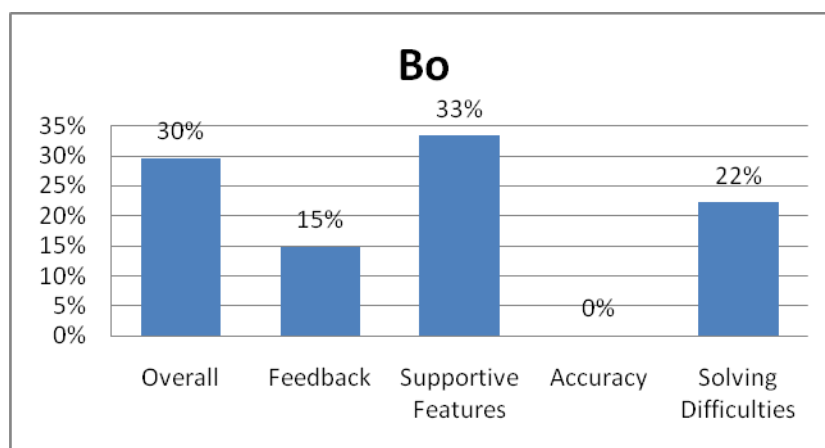


Figure 5.6. Bo's negative post-responses toward e4writing. Note: Supportive features in this figure include Statistic Log, Word Neighbor, Grammar Guide, Practice, and Board. Solving difficulties indicates how much e4writing helped students to solve their initial lexico-syntactic difficulties at the beginning of the course.

The quantitative test data indicated that Bo was more fluent than accurate. He stated that he was more concerned with accuracy than fluency. It was apparently easy for him to write his ideas and content. However, he struggled to improve his accuracy in writing.

He stated that his interest in English writing helped him increase his proficiency. He showed enthusiasm about English writing from the beginning of the course, submitted assignments on time, never missed the class and actively participated in class. Indeed, he was classified into the HA group based on the fluency, accuracy and quality of his pretest.

However, the error feedback on his first essay came as a shock to him as he had thought he was good at writing. After the first feedback, he felt depressed when seeing large number of errors. He slowly lost his motivation to improve his writing accuracy as he received the error feedback. The long, negative error lists and being uncomfortable with error feedback in English made he lose his confidence.

With regard to accuracy, his performance in the assignments over the course was lower than the average of the LA group. Although his writing improved in fluency from

pretest to posttest, his writing decreased in accuracy and quality. Nevertheless, the interview and his journal revealed that his awareness about grammar and vocabulary accuracy increased, that he felt that the frequent errors he made were gradually decreased, and *e4writing* helped him with accuracy to some degree. The quantitized data shows that these positive responses accounted for 21% of the total of his responses at the end of the course.

In conclusion, his English writing accuracy was not improved as much as he was initially expected, but *e4writing* seemed to influence his concerns about grammar and vocabulary errors.

Case Study 2: Jin

Student Academic Profile and Needs Analysis

Student academic profile

Jin was the one who most enjoyed English and was most eager to learn it among the four students. As briefly mentioned in Chapter 4, she already graduated from a university in 2008 and transferred as a junior in 2009. The department of English Education as described in Chapter 4, required that students have a high GPA score and pass an English examination including verbal and reading questions. She studied English while she majored in History as well as prepared for the exam for months. She seemed to enjoy English learning and showed her satisfaction with her current major saying that “it’s very interesting to learn about learning and teaching English together” and “I learned the learning theory you told us the other day in the methodology class.”

Jin was an active learner with somewhat lower tolerance of ambiguity than the other students. She mentioned that she could not overlook something she did not clearly

understand or that blocked her thinking process. She usually voluntarily asked questions in class whereas the other students spoke up in class only when called upon personally. For instance, Jin wanted to hear why the errors she made were wrong and why she was given particular *e4writing* feedback on the errors she made. She said that “they [the Q&A sessions] were much more helpful than I tried to understand them by myself” in the first interview. She also valued face-to-face classes to address questions as seen in the following excerpt.

When I can the error feedback directly from you, I can explain why I used this here and what exactly I tried to write here and then ask you more explanations about the error feedback. I like that I can get instant help right away. But the online error feedback was sometimes less meaningful to me when it seemed not to understand what I was trying to mean. Because I can’t directly hear why it was like that from the online. (second interview)

In this sense, she tended to be a verbal learner who preferred spoken or written explanations. Although *e4writing* provided feedback for word errors, she was not fully satisfied with the limited feedback but preferred the word choice lessons where she could listen to the usage of words in context in class. She said that “I think I can correctly use the words taught by you in class but I’m not still confident how to use the other words” in the second interview.

Moreover, her learning style (verbal and somewhat intolerant of ambiguity) was related to the way she had been used to learning English. Jin thought memorization would help students improve grammatical and lexical accuracy in English writing, but not as much as meaningful learning.

When students are taught even a single grammar rule, I think the students will write easily and accurately using the grammar rule if they are provided with detail instructions of what it is, when it is used, and what examples sentences are, rather than with rote learning based on memorization. (first reflective journal)

She believed that verbally presented information helped her understand more clearly and more specifically.

As mentioned in Chapter 4, Jin was very motivated to become an English teacher in a secondary school, which was why she transferred to the department of English Education. Her short-term goal of taking this writing course was to improve her writing ability to pass the English writing test and her long-term goal was to teach secondary students.

The foci of her studying were reading and grammar, but she thought that she was not good at listening, speaking and writing. She liked English writing moderately well and used English writing for a variety purposes (e.g., schoolwork, emails, nonschool journals or diaries, and chatting). She wrote in English once or twice per week, which was the most frequent among the participants. Jin showed estimated her English writing as a "low-intermediate" level and described her English writing as below:

My English writing is like I can speak in English...like Korean, I mean, not like Standard English, but it's like a way to put together words that I know. My writing isn't something accurate but it's like substituting the words that comes up in my mind (into a grammatical structure). (first interview)

She noted that compared to listening and speaking, her writing had not improved and she realized that she needed assistance beyond memorization and self-practice for grammar correction and word choice. Her goal was to write like a native speaker. With this goal, she thought her writing ability and skills were insufficient for teaching secondary students.

She put more value on ideas, content, and organization than accuracy in grammar and vocabulary. She felt that writing her ideas in English was not difficult. She thought that it was important to provide clear, relevant directions and examples in English writing

to enrich the central focus, and to organize the essay in so as to help to develop the central idea. She thought accuracy in both vocabulary and grammar was the next important aspect.

First of all, the most primary is contents. I think contents are important. Providing reasons clearly is the most important for the topic of ‘why people want to go college’. Vocabulary and grammar are the secondary. Once the contents are clear, readers grip the writer’s ideas and opinions. That’s why building contents are important, like clarity and unity of contents. (first interview)

In terms of the use of technology, she used computers and Internet for two to three hours a day for emails, messenger chatting, and Internet surfing. She did not feel that using the e4writing website was difficult or inconvenient. Rather she felt e4writing was convenient as she could identify right away what she wanted to know.

Perceptions of initial difficulties with grammar

She thought grammar was important for speaking, listening, and writing. She expressed confidence with her English grammar knowledge, saying that she knew English grammar well even though she was still making minor grammatical errors in writing. Her writing samples provided evidence that she had full knowledge of English grammar, as she made fewer errors than any other students in the course.

Perceptions of initial difficulties with vocabulary

Jin’s most serious difficulty with her English writing was vocabulary. The biggest barrier to her English writing was choosing the best word among synonyms. She believed that a good understanding of the difference in nuance between one synonym and another was important and that well-chosen words would convey the intended message in a powerful way.

In terms of vocabulary, as written in my reflective, a word has many meaning, like, like ‘maintain’ has many meanings and ‘keep’ has also many meanings. I’m

not sure which one would be the most appropriate in the context. I keep thinking whether what I've chosen is right. That's the most difficult to me. (first interview)

She used a Korean-English dictionary listing synonyms to solve this difficulty when writing and usually selected the most frequent word. However, she noticed that the use of a Korean-English dictionary resulted in the production of awkward or unclear expressions.

She expected that she could improve her vocabulary through this course. In the beginning of the course, the students were taught about the use of modal auxiliary verbs such as 'may', 'might', and 'could'. She reviewed the lesson in her reflective journal, mentioning that she had never learned the full details about modal verbs and could have more confidence in the appropriate use of modal verbs in context.

My most concern in English writing was word selection among synonyms to convey my intention best. For example, when using a modal verb to express probability or guess, I was concerned which one I should use among the modal auxiliary verbs containing a meaning of guess. Fortunately, through the last lesson about modal verbs, I understood that I should use 'may' if there is more than 50% possibility, 'might' or 'could' for less than 50% possibility, and 'must' for more than 95% possibility. I could have more confidence in applying these verbs in the contexts. And I used to use a modal verb 'will' with having no concept of its usage to express future actions. As I have learned 'will' meaning only 'be going to' in a secondary school, I didn't know the modal verb 'will' should be used when there is 100% certainty, and 'would' contains hypothetical meaning or a sense of probability is more appropriate when there is less 100% certainty. (first reflective journal)

Due to the education system in Korean secondary schools, she had been dependent on memorization and drills in learning English grammar and vocabulary. This caused her to have uncertainty in word choice. From the beginning of the writing course, she wanted to learn what words should be used in what context and to learn more authentic grammar.

Perceptions of *e4writing*

*Early (second week) perceptions of *e4writing**

Jin wanted to know how to use grammar and vocabulary in context in English writing. In particular, she expected to build vocabulary skills required in academic English writing to accurately communicate with her readers. Marked essays in *e4writing* were expected to help her eradicate her broken English caused by the negative transfer from L1 and to choose appropriate words in context. The following excerpt is about her initial experience of the marked essays:

If I use a term ‘jungbowha shidae (meaning ‘information age’), ‘jungbowha’ is ‘informationize’, so I would use ‘informationized society’. However, I learned from the marked essay ‘information age’ is a more appropriate expression. Also, for a word ‘gyoungjaengryok’ (meaning ‘competitiveness’) I would easily use ‘competitive power’. In this case, I learned that instead of ‘power’, ‘advantage’ meaning the stage of being in a better position than others who are competing against you is more appropriate in that context. I liked that the error comments helped me to avoid making these errors. (first reflective Journal)

In the above excerpt, ‘jungbowha shidae’ in Korean is a compound word formed from the words ‘jungbowha (meaning ‘information’)’ and ‘shidea (meaning ‘age’).’ Also, the Korean word ‘gyoungjaenryok’ is formed from the word ‘gyounjae (meaning ‘competition’)’ and ‘ryok (meaning ‘power’).’ In the process of transferring these words to English, like most Koreans, Jin applied used a word-to-word translation, resulting in a lexical error.

Jin also showed positive attitudes toward the *e4writing* essays. She stated that the Korean college students’ marked essays could provide practical assistance for her English writing in terms of accuracy. She paid attention to Korean students’ essays that included similar or same errors to those she might make. The common errors Korean college

students made in the *e4writing* essays were expected to help her avoid making the same errors.

Teacher (T): Do you think online essays in *e4writing* would help you to improve your English writing accuracy?

Jin (J): Yes, it would be helpful because, as mentioned in my journal, by looking at the errors were made by Korean, Korean students, I also think that the errors may be what I could make and what I don't know exactly about. I would like to learn through the lessons from their errors.

T: You'll keep being aware of that I won't make the errors?

J: Yes, keeping thinking that I shouldn't make the errors would help me a lot. Also, if they make a certain error which I can't be positive, I guess I can learn like oh, this is the way I should use. It looks like there are a lot to learn. (first interview)

She noted that the statistic log in the marked essays indicated students' errors and their frequency by categories such as plurals, determiners, tense, and capitalization would encourage her to review her frequent errors. Unmarked essays were also expected to help her to gain more ideas. She stated that she read the unmarked essays and then the marked essays. While she was reading the unmarked essays she focused more on content, which was her primary interest in English writing.

She also revealed a somewhat negative attitude toward pop-up comments in the marked essays. She stated that error feedback in the pop-up window was insufficient to fully understand why it was incorrect. She wanted to see a full of explanation of a certain error.

Oh, I feel like the comments are not enough to me. In *e4writing*, that is like, just two line comments. I wanted to know why it is incorrect and more. The comments were not enough. But when you explained why the other day, I got it and learned how to correct those kinds of errors. *e4writing* just tells us this is wrong with no understandable explanation. You know, there is something like I wrote it in this sense but why you don't think it makes sense. (first reflective journal)

The reason she thought like this in the above excerpt is that one of her frequent errors was the unclear or awkward expression error. Technically, it is not easy to provide

a full explanation of these errors no matter what type feedback she is provided with, either a pen or via a website. For such errors as unclear and awkward expressions, *e4writing* was not expected to satisfy her much.

Positive perceptions of e4writing at the end of the course

Overall, Jin showed positive attitudes toward *e4writing* for improving her English accuracy. Most of all, she thought *e4writing* was the best website that provided individualized learning, which is not found in other websites for English writing. She noted that direct involvement in *e4writing* encouraged her to improve her writing. In the beginning of the course, she expected that the common errors Korean students made in the *e4writing* online essays would help her to improve grammar and vocabulary accuracy. Jin could have the chance to discover errors on the unmarked Korean students' essays and to check if her findings were correct on the marked essays. At the end of the course, although she thought *e4writing* was useful for reviewing the common errors Korean students made, she found that the best way to enhance her English writing in terms of grammar and vocabulary accuracy was practice: writing essays, finding errors she made, and trying to correct the error by herself.

In particular, the second interview and her second reflective journal revealed that the marked essays were the most practical help. Error feedback allowed her to recognize the errors she made. She added that writing by itself was not very helpful for improving accuracy and that she needed to be made aware of the errors after feedback. She felt that her English writing improved a lot compared to the beginning of the course. In addition, she stated that her awareness of accuracy had improved.

Teacher (T): Do you feel your English writing in terms of accuracy was better than before?

Jin (J): Sure, better than the beginning.

T: Do you feel that way?

J: Yes, I feel like it was improved a lot. I wasn't sure if this is correct or not so I wrote somewhat carelessly. But now I know it must be wrong if I do in this way. I start to write with consciousness. I'm getting used to it. (second interview)

In terms of grammar and vocabulary, she felt the marked essays were highly beneficial for improving grammatical accuracy. She stated that she could have a better understanding of grammar through detailed error feedback (both direct and indirect feedback) on the marked essays. She felt that these features helped to improve certain grammar items to which she had paid little attention, particularly the usage of determiners, modal verbs, and conjunctions.

I gained much better understanding of grammatical errors I made through the most remarkable feature, the marked essays. The marked essays in *e4writing* indicate every single error I made, provide correct answers for the errors and further explanations of errors through pop-ups. (second reflective journal)

In addition to the benefits of the error feedback on the marked essay, the linked online Grammar Guide and the Statistic Log helped her to increase her grammatical accuracy. The Grammar Guide provided her with detailed explanation of the errors she made, and the statistic log helped her to increase her awareness of the frequency of her errors. She stated that the Statistic Log helped her to be more careful with punctuation, redundant words, and articles (a/the).

Negative perceptions of e4writing at the end of the course

As she expected in the beginning of the course, *e4writing* did not help her very much with vocabulary. Throughout the second interview and her second journal, she revealed that *e4writing* was insufficient for helping her with her vocabulary and did not feel that her vocabulary improved compared with the beginning.

I have mentioned that word choice was the most difficulty in English writing to me. That, well, I understood why a certain word was more proper when I was

taught by you and when the errors I made were corrected. But, in case of words that I've never used in this course, I think I may still get confused with using the words. I should keep learning the usage of words. So, in terms of word choice...I don't know how much it was improved. (second Interview)

She made errors mostly in vocabulary throughout the eight assignments and the two in-class writing samples: redundancy, unclear/awkward expressions, and wrong words. However, she did not make many grammatical errors. In the cases of word errors, a long explanation is required as these errors are based on context. The teacher could not provide detailed feedback in the pop-up windows. The following is an excerpt from her reflective journal, which shows how she thought about word error comments:

For example, when I should choose a word from synonyms like 'some' and 'several', I chose 'some' to express 'there are some reasons...' The *e4writing* comment said that 'This is the wrong word/expression or it does not exist in English. Correct to "several".' I felt sorry there was no other concrete explanations, in what contexts I should use the word 'some' or the word 'several'. (second reflective journal)

However, face-to-face error feedback made detailed feedback possible. This writing course had two individual feedback sessions in a computer lab, which allowed the students to review their own online essays and to have Q&A sessions about their errors with the teacher. Jin was very satisfied with these sessions as she could have a chance to explain why she selected a particular word and to be provided with clarification as to why she should have used another word.

Moreover, the second interview revealed that she used two strategies to avoid confusing words. First, she used a dictionary and selected more familiar words. The familiar words were the most commonly used words. The familiarity reduced her anxiety caused by confusion. The other strategy was that she googled in English. She viewed Google as a "corpus" or a quick "reality check" for her. She used it to confirm that there are people who use a particular word and to select the most frequent word/phrase used by

native speakers. Indeed, Jin did not benefit much from Word Neighbor, a “corpus” in *e4writing*. Like the other students, she felt Word Neighbor was not easy to use as it did not provide instruction. On the other hand, Google allowed her to easily access a huge database including formal written styles.

The other unhelpful aspect of *e4writing* was the Board. Unlike the other students who showed passive attitudes toward the Board, saying that no one used it,, Jin said that the reason she did not use it was that she could ask for immediate explanations in class, which enabled her to gain a better understanding easily.

In summary, Jin showed her satisfaction with *e4writing* to improve her grammatical accuracy. However, she perceived that *e4writing* was not beneficial to enhance her vocabulary as much as her grammatical accuracy.

Suggestions for improving e4writing

Jin’s primary concern was to develop vocabulary skills. She thought she developed these skills with words addressed in the *e4writing* feedback. Indeed, this writing course provided four sessions dealing with word choice and two sessions dealing with word choice exercises with the *e4writing* essays. She stated was satisfied with these lessons. However, she noted that *e4writing* did not fully meet her needs. In her journal, she asked that synonyms, along with examples, be included into *e4writing*. She thought *e4writing* could then help students who had no idea of what word to choose in a certain context.

Like Bo, Jin suggested increasing the amount of questions. She mentioned that she enjoyed Practice and it helped her find errors easily. At the same time, she stated that seven questions for each category were not enough to enhance her grammatical accuracy.

She suggested that *e4writing* include more questions along with their explanations. Like Bo, she felt going to the original essays to review the explanations was inconvenient. She wanted to instantly check her grammatical accuracy.

Performance on Assignments and Tests

The effects of e4writing on writing assignments

Jin tended to invest much time in her assignments brainstorming, drafting, looking up words, using google to find vocabulary, and revising. She mentioned that it took more than four hours to do her first assignment. Although the time she spent writing gradually decreased, it still took more than one hour for her last assignment. This was because she was very concerned about ideas, organization and content of the essays as well as accuracy. In the beginning of the course, she thought ideas, organization and content were more important than accuracy, but as time went by she increasingly paid attention to both.

Jin performed well in the writing course. Table 5.3 shows that her writing fluency on average (260.4 words) was above average (211.7 words) (see Table 4.7). Moreover, she was superior to the other students with regard to the error ratio. The average error ratio in her assignments, 9.5%, was the lowest figure in the course. Compared to the HA group, she was also excellent in accuracy. In the HA group, the average number words was 216. 5 words and the average error ratio was 14.9% (see Table 4.8).

Table 5.3

Results of Writing Assignments of Jin

Assignment	Total Words	Error Frequency	Error Ratio (%)
1	213	23	10.8
2	208	28	13.5
3	166	15	9.0
4	256	32	12.5
5	187	18	9.6
6	301	38	12.6
7	420	33	7.9
8	332	11	3.3
Average	260.4	24.8	9.5

As seen in Figure 5.7, her writing gradually improved from assignment one to assignment eight in accuracy. In particular, her writing accuracy in assignment eight (error ratio=3.3%) was much better than that in assignment one (error ratio=10.8%).

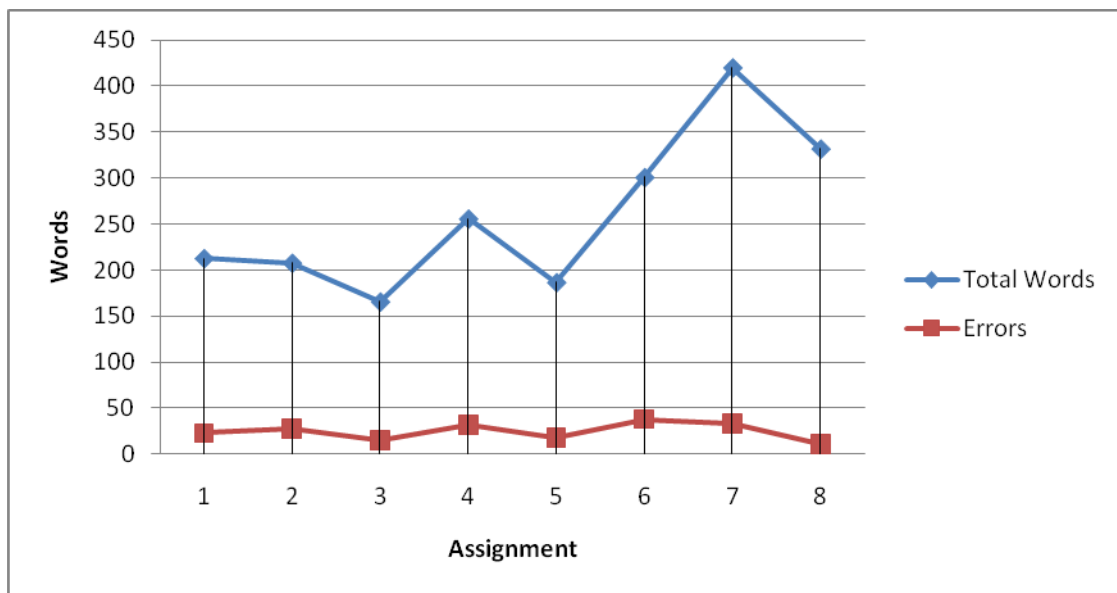


Figure 5.7. Changes in Jin's assignments.

One of her frequent grammatical errors concerned single/plural nouns. In Figure 5.8, she incorrectly used “human being”, “risk”, and “human being’s” instead of “human

beings”, “risks”, and “human beings”. No single/plural noun errors were found in her last assignment as seen in Figure 5.9. Although it cannot be said that her errors with single/plural nouns were eradicated, it seemed that she paid attention to the use of the nouns in her last assignment.

As we all know, human being also have tried and taken risk of doing things that they feel unwilling to do. If it had not been for human being’s strong will to try some difficult things that they do not enjoy, we couldn’t live a convenient and comfortable life. If we only do things that we enjoy doing, there will be no advances in our life and we can’t experience a variety of things worth doing. Therefore it is recommendable to try and do things that we don’t want to do.

Figure 5.8. A passage from Jin’s first assignment.

I’m going to discuss apartments second. In terms of expense, living in apartments, students can cut down food expenses because they cook for themselves. In case of convenience, students living in apartments have their own private place and feel free to do what they want. In aspect of intimacy, students living in apartments can form an intimacy with many neighbors.

While both places have many different advantages, I think that, for students at universities, it is better to live in university dormitories. The main reason is that it can help students fit into the campus life.

Figure 5.9. Passages from Jin’s eighth assignment.

The effects of e4writing on writing tests

Table 5.4 presents her pretest and posttest results. Jin’s writing in fluency on the pretest (156 words) was comparable to the overall average of total words (Mean=156.8 words) but quite lower than the HA group’s average (Mean=178.4 words). The error ratio on her pretest (19.9%) was lower than that of the HA group (23.1%). It was noted that on the posttest, her total words and TWE score were are above average. Her error ratio (17.1%) was lower than that of the HA group (21.7%) (for the overall averages of the tests for both groups, see Table 4.8).

Table 5.4

Results of Pretest and Posttest for Jin

	Total Words	Error Frequency	Error Ratio (%)	TWE Score
Pretest	156	31	19.9	3.5
Posttest	199	34	17.1	4

In general, Jin improved her English writing from the pretest to the posttest. Her writing increased 27.6% in fluency (156 words to 199 words) and 0.5 points (3.5 to 4.0) in overall evaluation. With regard to accuracy, the error ratio decreased 14.1% (19.9% to 17.1%).

The first interview revealed that Jin's focus on ideas, content and organization made her feel anxious during the pretest. She said it was difficult to brainstorm and organize her ideas for the pretest. In addition, like most students, as she was unaccustomed to English writing within a 30-minute time limit, she would start writing only after a few minutes. Figure 5.10 shows her essays from the pre and post tests. Her most frequent errors were found in the determiner/article category on the pretest but the errors in this category were reduced from 10 on the pretest to two on the posttest.

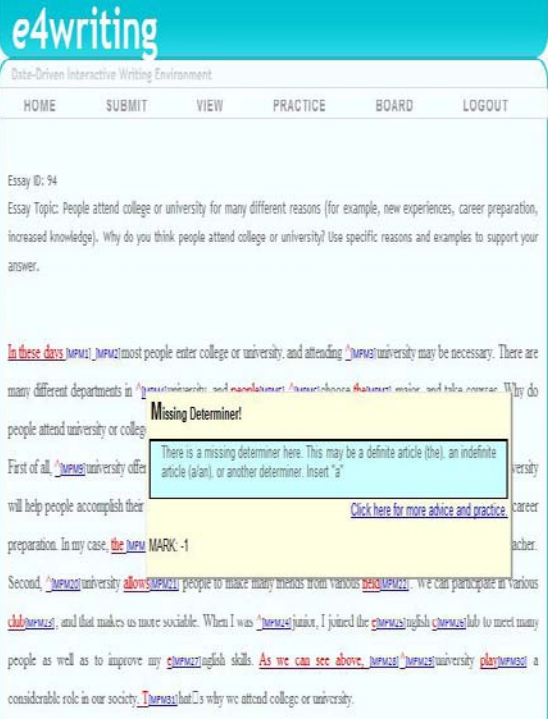

<p>In these days many people enter college or university, and attending university may be necessary. There are many different departments in university, and people choose the major, and take courses. Why do people attend university or college? I will talk about this topic with relation to university's function.</p> <p>First of all, university offers people practical knowledge. Learning the specific subject in university will help people accomplish their work. And that kind of knowledge contributes to career preparation. In my case, the knowledge related to english education will be very helpful when I become a teacher.</p> <p>Second, university allows people to make many friends from various field. We can participate in various club, and that makes us more sociable. When I was junior, I joined the English Club to meet many people, as well as to improve my english skills. As we can see above, university play a considerable role in our society. that's why we attend college or university.</p>	<p>These days, many children begin learning a foreign language before or as soon as they start school. It is a tendency to start learning a foreign language earlier in Korea so many parents press their young children to learn a foreign language. However, I disagree with the idea that children should begin learning a foreign language as soon as they start school. There are some reasons why I disagree with the idea.</p> <p>To begin with, I believe that children should start learning a foreign language when they grow up enough to understand or comprehend their mother tongue completely. If children begin learning a foreign language before they master their first language, they would be confused between their first language and foreign language. As a result, they may have difficulties improving their language ability.</p> <p>Second, if they are pressed to start a strange foreign language at an early age, they would get stressed out and forgive their learning a foreign language. Therefore if children want to start learning a foreign language, parents should stop their learning.</p> <p>Generally speaking, children are recommended to start learning a foreign language when they become mature and intelligent enough to acquire a new foreign language.</p>
<p>Hand-writing essay from the pretest</p>	<p>Hand-writing essay from the posttest</p>
 <p>Online essay from the pretest</p>	 <p>Online essay from the posttest</p>

Figure 5.10. Jin's essays from the pretest and posttest.

Overall Results from Qualitative and Quantitative Analysis

Although her primary concern was fluency, she improved with accuracy. Her positive attitudes toward *e4writing* were evident in her reflective journals and interviews; she thought that *e4writing* helped her to increase her awareness of errors, particularly the errors she overlooked. As seen in Figure 5.11, her positive responses associated with accuracy improvement (e.g., error decrease, accuracy improvement, and awareness increase) accounted for 25% of the total of the positive responses at the end of the course. On the other hand, with respect to vocabulary, 11% of her comments at the end of the course were positive.

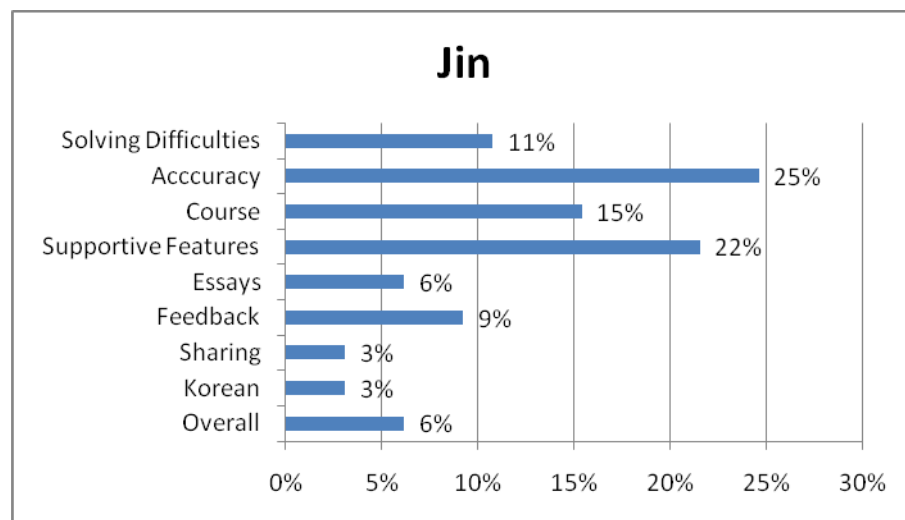


Figure 5.11. Jin's positive post-response toward e4writing. Note: Supportive features in this figure include Statistic Log, Word Neighbor, Grammar Guide, Practice, and Board. Solving difficulties indicates how much e4writing helped students to solve their initial lexico-syntactic difficulties at the beginning of the course.

Case Study 3: Young

Student Academic Profile and Needs Analysis

Student academic profile

Young liked challenges and believed that a variety of experiences gave him “a new perspective on what is true and what is good” in the world. I had many chances to

personally talk with him since he was willing to help me with technical support, erasing the blackboard, and serving the students pizza. He was a student president of the department of Japanese Education and seemed to be used to assisting students and faculty.

He said he liked music since when he was young as his family was engaged in the music business. Playing the guitar and listening to all kinds of music was his favorite pastime. Music was the first way that Young became interested in English. He started to be exposed to English through English lyrics in many songs. He mentioned that he did not feel that “English was a fear” before he was taught English at a junior high school. However, Young started to dislike and struggle with English due to the rote learning, memorization and drills in his English classes, which did not allow him to fully understand the content of the classes. Technical terms such as ‘verbs’, ‘modal verbs’, and ‘relative clause’ in grammar books, although they were written in Korean, were overwhelming to him. As he was poor at and disliked memorizing, his English grades were always poor and he felt humiliated when he was physically punished in class due to his low grades. English classes became a “fear” to him.

In the first grade in a middle school, there were about 20 to memorize. 30 in the second and 50 in the third grade. I had to memorize all the words and sentences to take an exam. I got punishment, of course as I was really bad at memorizing. It was a terrible, terrible time. (first reflective journal)

Even though he hated the teaching methods for English in school, music was still important to Young. Reading all kinds of books and magazines, even those in English, gave him pleasure if they were related to rock music and bass guitars. He felt proud of himself when he received great scores in English listening exams thanks to his listening to English pop music. He was eager to study applied music at college and become a professional musician. Unfortunately, his dream was broken when he had an accident and

could not play the guitar any longer. Young ended up entering the field of Japanese Education and decided to become a teacher. Since then, he devoted himself to Japanese. When he was a sophomore, he double majored in English education.

The most recent experience of English writing was a Basic English writing course, a requirement course he took in 2008. He had gone through a hard time due to his lack of grammatical and lexical knowledge in the writing course. Negative feedback on his poor writing in the course lowered his motivation to learn English writing and made him anxious about making errors in English writing.

Obviously, the biggest difficulty was English writing. I feel like rejection from the bottom of my body while I'm studying basic grammar. It was hard for me to comprehend even the basic when I was taking the basic writing course last year. Honestly, I can say that I don't want to make efforts. I am really low confident of English writing because there are a number of errors no matter how hard I try. With this emotional reason, the other reasons I feel difficulty with English writing are that I almost forgot the words that I learned in secondary school, and particularly that I feel deep anxiety over making errors in writing. (first reflective journal)

Although he experienced a difficult time in the basic writing course, he took my writing course, which was not a requirement for double majoring in English Education. However, he still had low task self-esteem¹¹. He evaluated his current English writing as "trash" in the first interview. Although he had very low self-esteem with respect to his English writing, at the same time he showed positive attitudes toward English during the writing

¹¹ Self esteem has been divided into three levels. Global self esteem is said to be relatively stable in a mature adult, and is resistant to change except by active and extended therapy. It is the general or prevailing assessment one makes of one's own worth over time and across a number of situations. Situational or specific self-esteem refers to one's self-appraisals in particular life situations, such as social interaction, work, education, home, or certain relatively discretely defined traits, such as intelligence, communicative ability, and athletic ability, or personality traits like gregariousness, empathy, and flexibility. Task self-esteem relates to particular tasks within specific situations. Specific self-esteem might encompass second language acquisition in general, and task self-esteem might appropriately refer to one's self valuation of a particular aspect of the process: speaking, writing, a particular class in a second language, or even a special kind of classroom exercise (Brown, 2000).

course, saying that his goal in my writing course was to learn how to express his thoughts in a written way if he could.

His total length of study for English was 7.5 years and his highest TOEIC score (430) was the lowest among the participants. While the other students wanted to become English teachers, Young was not interested in being an English teacher at the beginning. However, he had to miss four lessons for student teaching during the course and the student teaching experience brought about a change in his mind. He improved his English and felt more confident. Young stated that he would like to attempt the English teacher employment examination.

He wrote in English once per month on average for schoolwork, emails, and his part-time job. As he was working at a photo studio and a musical instrument repair shop located in front of the U.S. base, he contacted many foreigners and had chances to communicate with them in English. He mentioned that these experiences seemed to encourage him to “pay attention to English”, use English “more fluently and accurately”. He enjoyed using computers and usually spent four hours per day on computers and Internet for schoolwork, messenger chatting, Internet surfing, and online lectures. He was not good at English typing so preferred pen-and-paper writing to a computer word processor.

Perceptions of initial difficulties with grammar

In the first interview, he said this writing course was the most stressful one for him in the spring semester. The greatest difficulty he perceived was his lack of grammatical knowledge. Low self confidence derived from the negative previous experience in English prevented him from learning English grammar for a long time. He

felt even very basic grammar was difficult, for example, adding –s/-es to 3rd person singular verbs.

As thinking that I will be punished if I am wrong weights on my mind, I haven't completed the first assignment because I don't know structures and have little vocabulary even though I have a lot of ideas and really wanted to express them. I tried to express them in the other ways racking out my brain, but I couldn't. To be honest, Word with spelling and capitalization check helped me with the second assignment. Due to this emotional reason, I think I feel difficult in English writing. (first reflective journal)

I am not confident at all. Indeed, it's been a while since I stopped learning English. I am not sure what relative pronouns are when you name them. I easily forget the most basic ones like adding '–s' to 3rd person singular verbs. (first interview)

However, it was not that he did not have any grammatical knowledge. He stated that he sometimes felt something was wrong in ill-formed sentences while reading them. However, he added that even when he figured out the errors, he could not explain why the sentences were wrong. The researcher's reflective journal showed that he did not have adequate knowledge to figure out what was incorrect and how to correct it. In addition, his insufficient grammatical knowledge caused him to feel anxious about writing as well as to have low self-confidence in grammar.

As I wrote in my journal, I usually focused on reading and solving questions, which makes me feel like there is something wrong while I am scanning then I feel 'oh, this is wrong'. Because I keep listening to music, you know, listening to music is like reading with getting into the rhythm. When I'm reading music, I feel something awkward and then try to find out what is wrong. But, once I start to write, I focus on writing itself and feel that everything I know is vanishing. (first interview)

The other reason why he thought grammar was difficult was due to the interference of his Japanese language knowledge. With insufficient knowledge of English grammar and a high level of proficiency in Japanese grammar, he sometimes felt making well-formed English grammatical structures was difficult. He stated that a negative

transfer of Japanese grammar to English writing occurred when he produced passive form sentences.

Japanese use a passive form a lot. I found that I sometimes use the Japanese form when writing in English. I'm confused which one is correct. I'm used to Japanese writing more than Korean writing...All are in a mess. (first interview)

He used to refer to books to solve his grammar difficulty. However, this solution caused another problem. He stated that he had difficulty fully understanding grammatical explanations in the books and that it took him hours to search for every single item that he did not understand. This writing course did not provide many grammatical lectures, the way most English writing courses in Korea are conducted, and instead it provided more practical activities and grammar explanations. The researcher's reflective notes showed that he tried to participate in the classroom activities such as finding and correcting errors in groups, in pairs, and individually.

Perceptions of initial difficulties with vocabulary

He also thought his limited vocabulary was a problem. He stated that he paid more attention to vocabulary than grammar while he was taking the pretest in class. This was related to his expectation that he wanted to learn from this writing course. He was concerned about delivering the ideas.

Thinking that it's enough for me to speak and listen to in English may lower my motivation of English writing, I guess. What I want from this course is not fancy writing containing difficult words and structures but writing to convey what I want to say with the easiest words. (first reflective journal)

The first interview revealed that to address his lack of vocabulary, he sometimes avoided topics, circumlocuted, and abandoned messages. The researcher's reflective journal showed that he wanted to agree with the essay topic of the pretest but could not help disagreeing as he could not develop supporting ideas for agreement. He avoided the

topic that posed language difficulties. The following anecdote shows that he used two strategies: circumlocution, a way of writing something using more words than are necessary instead of being clear and direct, and abandoning the message, a way of discarding a message because of language difficulties. .

I focused on vocabulary than on grammar in the first English writing test because I lacked vocabulary. For example, when I'd like to use a word '삼촌 ('Samchon', meaning 'uncle')' but don't know the word in English, I can't help expressing 'brother of my father'. That makes the content difficult. Something like '개인주의 ('Gaeinjuyui' meaning 'individualism'). In case of the recent assignment, 'why do people go to a college? I wanted to write like this 'to raise my social position' and 'to follow others'. I should think what's the word for 'following others' and it's '군중심리 (Goonjoongsimri' meaning 'group mind')! I wanted to use the word. But the English word didn't come up with my mind at all so I gave up writing about that. (first Interview)

Perceptions of *e4writing*

*Early (second week) perceptions of *e4writing**

Young showed low self-esteem even when he described his initial experience with *e4writing*. Young stated that he did "not completely understand English in *e4writing*". Indeed, he was not comfortable talking about *e4writing* saying that "I'm not qualified to say about it because I've got a minus 41 error feedback on my first essay". He apparently understood *e4writing* was a website to provide him with error corrections for his essay. However, until the first interview was conducted, he did not understand *e4writing*, the purpose of and the usage of direct and indirect feedback, the linked Grammar Guide and Word Neighbor, and Practice. He stated that the only thing he referred to was the marked online essays.

Nevertheless, he felt that *e4writing* could be helpful to his accuracy. Red underlines and pop-ups for errors were expected to increase his error noticing.

Young (Y): I think it would help me a lot. At first, it looked that there were only red underlines so I thought that these lines were the error checks for something wrong. But it was not long before I found something popping up. Wow, it was good. I guess the website manager must work hard.

Teacher (T): I'm managing it.

Y: Really? I thought somebody else is doing that. About I thought four or five people manage the website.

T: I developed it and upload all of the essays. But grading is the job of a native speaker and me.

Y: I thought it is the one that the department of English Education serves for students.

T: That's why it doesn't look professional (laugh). It's for study not business.

Y: I like it because it looks sharp. (first interview)

As seen in the above excerpt, he seemed to be under the impression that *e4writing* was being systematically managed and contained a lot of useful resources.

Young noticed that the error feedback he was given contained detail error descriptions. He thought the direct feedback would be the most helpful for his English writing. In addition, he liked that *e4writing* looked simple to use and it was easy to join *e4writing*.

Most of all, I like the website because it looks simple and good. I think it's great that the website gives much detailed error feedback and lets me know why. Also, I like it doesn't ask any other information except my name, an ID, and a password to register the website. (first reflective journal)

Positive perceptions of e4writing at the end of the course

Overall, Young had positive perspectives toward *e4writing*. The remarkable finding was that he gained confidence in English writing at the end of the writing course. Compared to his initial perspectives presented in both the first interview and in his first reflective journal, he showed that he had more confidence in both the second interview and journal. In the first meeting, he did not demonstrate how he felt because he did not know much about English and *e4writing*. However, he passionately described his attitudes toward *e4writing* in the second meeting.

He was very concerned about the number of errors he made when writing. This concern caused him to pay attention to English grammar, motivated him to develop his grammar knowledge, and made him feel happy when he wrote accurately. He started to feel more comfortable than at the beginning, and wanted to keep writing. His increased confidence in writing was positively transferred to confidence in English speaking. The following excerpt shows how satisfied he felt:

I had been concerned about how many minuses I got, like ‘I got some minus today’, ‘I got less minuses’. I was concerned whether I had to use either ‘-ing’ or ‘to infinitives’ here, and kept thinking that “‘to infinitive’ is right, no, ‘-ing’ should be here” or that “I should use ‘that’, ‘this’, or ‘it’ here”. After long thinking, when I found my choice was right in the error feedback, I felt so great “oh, this is right”. I kept writing in this way, and kept looking forward to seeing error feedback by getting into the website several times a day. I feel more comfortable than ever. This means a lot to me. I feel like I’d like to keep writing. Yes, I should know about English although my primary major is Japanese. Now that I write in English, my confidence is glowing, and that made me possibly say English out. While student teaching, students had asked me in English for fun. I had answered in English as in Japanese. They were impressed by that. I can say with confidence that I’m studying English education. I feel my confidence was up, very much, still don’t know about my proficiency though. Now that the objective assessment data say that I’m here, at this level, I confidently feel like I’m going in right direction as well as feeling comfortable with English speaking. (second interview)

From the second interview and his second journal, it was found that his attitude toward *e4writing* was somewhat different from the other’s attitudes. The second interview revealed that he considered *e4writing* to be a formative assessment tool that allowed him to reflect on his performance.

Most of all, I liked that *e4writing* is a credible evaluation website. It is true that there was no measure to evaluate whether the grammar use on my English essays is correct or not. Most of available books for English writing contain exercises with simple sentences allowing a word or a phrase insertion. There is no chance to confirm that the answers I try are correct or not, even unknowing whether it is well-structured English or not. I felt there are limits to study English writing with books. With regard to this, *e4writing* was greatly helpful to my English writing. (second reflective Journal)

Moreover, he stated that the most beneficial aspect of *e4writing* was direct error feedback. He had used other language programs and a Google translator to check his work. Compared to the programs and the Google service, the direct feedback seemed to meet his need for clear answers. In particular, he stated that he increased his grammatical accuracy due to the direct feedback. The direct feedback functioned not only to increase his motivation but also to determine whether he had appropriately used grammatical items.

The most benefit was that I could get direct error effect on my essays. I have used some learning computer programs, a Google translator, and similar real-time feedback program. It was very compared to the programs I used. The programs suggested routine feedback like that “past particle follows HAVE “or “this follows TO infinitives”. I like the direct feedback much as it provides me with more concrete directions which say “what errors occur and why they are incorrect”. I could recognize that I repeated the same errors. As *e4writing* lets me know what I am exactly wrong in my essays, I could easily focus on the errors keep thinking that “this is what I should take care of”. (second reflective Journal)

Negative perceptions of e4writing at the end of the course

Through the second interview, it was found that the writing course raised his writing awareness while the direct feedback positively influenced him after writing. The reason for this was his limited English proficiency. The direct error feedback helped him to recognize errors. However, he did not understand the reason for the error. In addition, he stated in the second interview that he rarely used Word Neighbor and the Grammar Guide saying that “they were not helpful”, *e4writing* “lacks recourses”, and that “there seemed no explanation for errors” in *e4writing*. He showed in the second interview that his limited English proficiency caused him to feel uncomfortable with all explanations in English. He stated that it was the lessons that made helped him most with writing. He also stated that the lessons provided him with more understandable explanation with regard to grammar, and more examples in terms of word choice. Also, he mentioned that

poor English prevented him from understanding grammar explanations presented in *e4writing*.

I usually try to remind of the past lessons while I'm writing. For example, if I learned 'would' last time, I try to keep it in mind not to make errors in 'would' while writing. As I learned 'when' and 'while', the items I should remind is going to be cumulated. (second interview)

You know, I am at a low level, really, really low. So I wished that the explanations had been in Korean. I tried to understand what they meant by looking up a dictionary, but it wasn't easy to get them. (second interview)

It was hypothesized that because he could understand things easily Korean, this caused him to feel that the writing course was more helpful than *e4writing*. Indeed, with his low level of English grammar (he barely understood English grammar even when it was explained in Korean), his statements about the course were highly understandable.

Another reason he depended on the course was that he was given reading materials related to the essay topic of each assignment. Providing reading was not initially intended for this course. At the beginning of the course, casual talk with the students led me to decide to provide reading materials for the assignment. A month later, the first interview revealed that some students thought that reading before writing was helpful for ideas and related vocabulary. Young was one of the students. He read comic books like Snoopy thinking that it might help his English. He stated that if he had not been provided with the appropriate reading he might have felt writing each assignment was more difficult.

Suggestions for improving e4writing

The greatest difficulty he felt while he used *e4writing* was that *e4writing* presented everything in English. He suggested that a Korean service in *e4writing* might help students who were at a low level of English proficiency. In particular, he thought

that Practice might be beneficial to improve his accuracy but he felt uncomfortable with the brief answers presented in the Answer boxes due to his limited English. For instance, for an erroneous sentence “A child does not have to waste time to go to a teacher who is specialized to one subject”, the Answer box shows “ANSWER IS: A child does not have to waste time to go to a teacher who is specialized in one subject. OTHER ANSWERS MAY ALSO BE CORRECT”. He wanted to see only errors and their corrections in the Answer box such a brief form as “specialized to -> specialized in”.

Another suggestion by Young was that *e4writing* could provide more resources like the ones given to him in class. In addition he suggested that more descriptive resources in Korean would help him to more clearly understand the content.

He also had some criticisms about the technical aspects of *e4writing*. He was only one who informed me a technical problem with *e4writing*. The researcher’s reflective journal showed that he was unable to submit an essay once. He guessed that his submission was successfully done but it was not sent to me. He suggested that *e4writing* provide a service that could identify uploaded files on *e4writing*. Another technical suggestion was to students to modify their information on *e4writing* such as ID or password.

Performance on Assignments and Tests

The effects of e4writing on writing assignments

Young said that he regarded his assignments like writing tests and tried to write them within 30 minutes to evaluate his performance in each assignment. He was more concerned with where he was than comparing himself to other students. He claimed that he needed to evaluate his writing “even if he received low grades on the assignments and

on the writing course.”

He could not complete all assignments due to his student teaching, like Bo. However, Young stated that he did “not want to miss any assignment”, and submitted assignment 6 during student teaching. In general, his overall performance over the 7 writing assignments indicated that he struggled with accuracy. As shown in Table 5.5, his average total words were 156 words and error ratio was 24% while the average of total words in the LA group was 204.9 words and the average of error ratio in the group was 21.6% (see Table 4.7).

Table 5.5

Results of Writing Assignments of Young

Assignment	Total Words	Error Frequency	Error Ratio (%)
1	139	41	29.5
2	112	34	30.4
3	159	35	22.0
4	127	24	18.9
5	170	33	19.4
6	145	39	26.9
8	240	54	22.5
Average	156	37.1	24

Overall, as shown in Figure 5.12, comparing the first two assignments to the others, he showed slight progress in his writing in terms of accuracy.

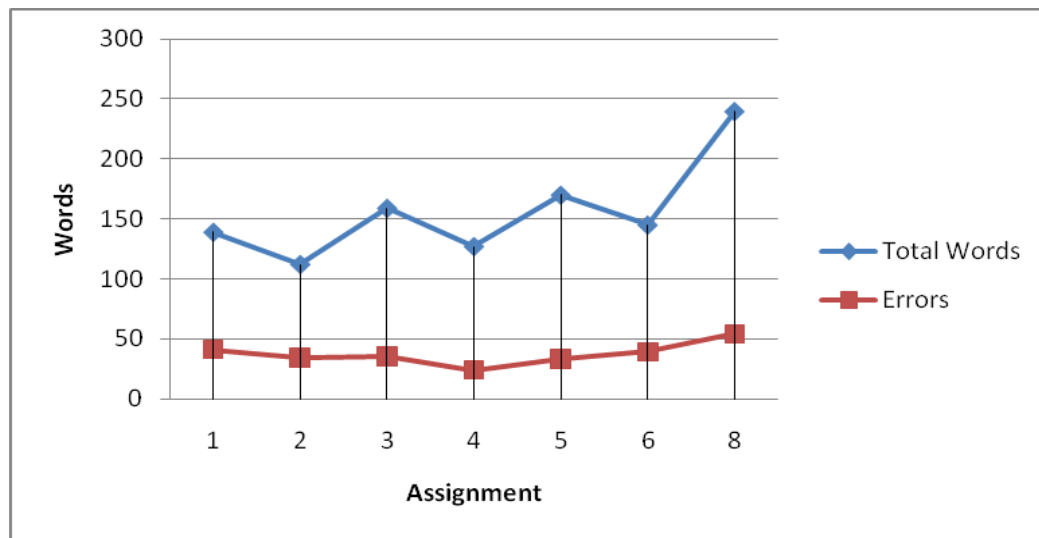


Figure 5.12. Changes in Young's assignments.

In the beginning, Young was not aware of the usage of conjunctions, saying that "I'm not sure if I should use a period or a comma here and when therefore or however is used." Figure 5.13 and 5.14 show his performance on the assignment one and eight. While his assignment showed that he incorrectly used various conjunctions, such as "although", "but", "because" and "however" assignment eight revealed that he used conjunctions more accurately.

to sustain their status, they must do some specific action. For example, Although your father want to sleep at 10am, but he must gets up early to go to work. because he has his family who he want to keep his family's happy. If you want to have nice body, although you like fast food, you don't eat fast food enough and do exercise. Second, this statuses need responsibilities. korean man must have military service because Korean rules show. A man who born in Korea must has responsibility of military service. Many Korean man don't want to go to the military. however, they must go there for keep the status of Korean. People can't

Figure 5.13. A passage from Young's first assignment.

Living in university housing is good to learn about friendship and co-operation. Many students may not have been living same place with many of the people, and they would not think about ways of living together and co-operation. Experience of living in university housing could give information to them how important to understand social responsibilities and necessary of keeping rules. But, living in university housing is not good for people who like drink or going to club, because they must to come back at 12P.M

Figure 5.14. A passage from Young's eighth assignment.

The effects of e4writing on writing tests

Table 5.6 shows that in the pretest, the total words were 111 and the error ratio was 45.9%, which indicates that half of his essays contained errors. In the posttest, the total words were 122 and the error ratio was 26.2%. His writing in fluency increased (111 words to 122 words, 9.9% increase) and his error ratio decreased (45.9% to 26.2%, 42.9% decrease). Compared to the LA group, his writing in fluency did not reach the average of the group (Mean=126.40 words) in the pretest and in the posttest (Mean=151.4 words). However, the error ratio in his posttest was lower than that in the LA group (Mean=30%). With regard to the overall evaluation, the *TWE* scores indicated his score was comparable to the LA group's average score (2.9) in the pretest but was lower than the group average (3.5) in the post test (for the averages of the tests for both groups, see Table 4.8).

Table 5.6

Results of Pretest and Posttest for Young

	Total Words	Error Frequency	Error Ratio	TWE Score
Pretest	111	51	45.9	3
Posttest	122	32	26.2	3

As seen in figure 5.15, Young organized his thoughts by taking notes in Korean in the margins before writing his essays and then using easy English words. His pre-writing

essay shows that he made 12 errors in capitalization, spelling, and punctuation. For instance, he used “finialy” for “finally”, “pareants” for “parents” and used capital letters in the middle of the sentence. Even though these errors could be considered somewhat minor as they do not cause significant reader confusion, he often received feedback on his errors. The feedback seemed to help him be aware of these errors and on his posttest, there were only five of these errors.

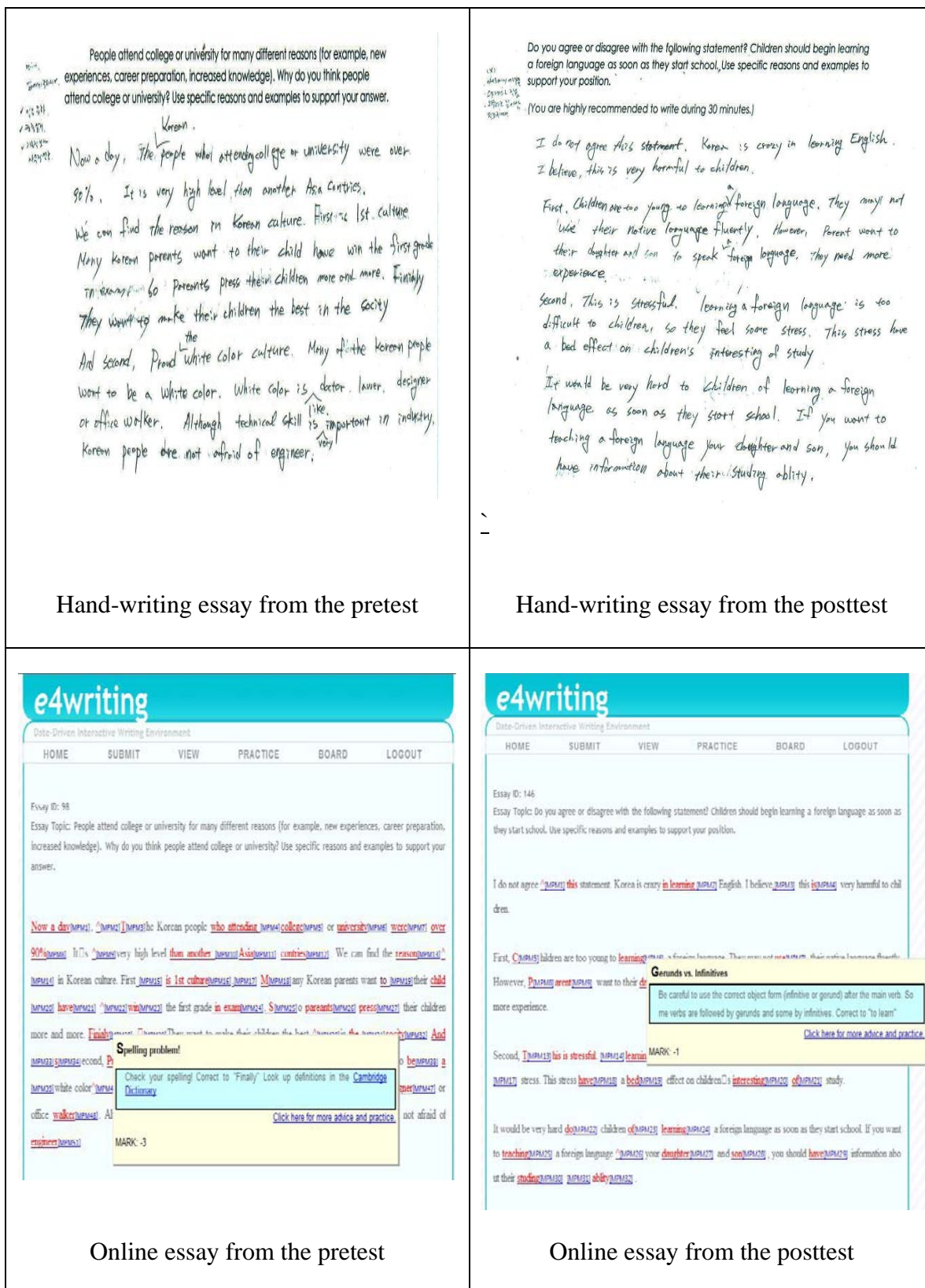


Figure 5.15. Young's essays from the pretest and posttest.

Overall Results from Qualitative and Quantitative Analysis

In general, Young showed improved his English writing in terms of both accuracy and fluency. Noting that affective aspects (e.g., anxiety, depression, and low self-esteem) occupied 65% of the total of his difficulties at the beginning (see Figure 5.16), it was worth noting that there was improvement in both accuracy and fluency.

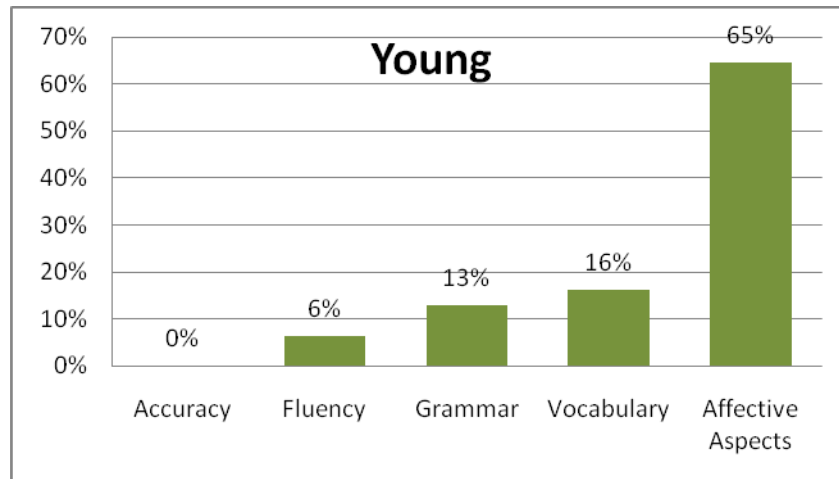


Figure 5.16. Young's difficulties with English writing.

The decrease of the error ratio (45.05% to 28.7%) shown in the two tests results indicated that he seemed to be concerned about accuracy. In Figure 5.17, you can see that his responses to accuracy at the end of the course constituted 26% of his total positive responses, and in particular this figure included the improvement of error awareness. In addition, the error decrease seemed to support his statement that he felt *e4writing* was very beneficial to his accuracy.

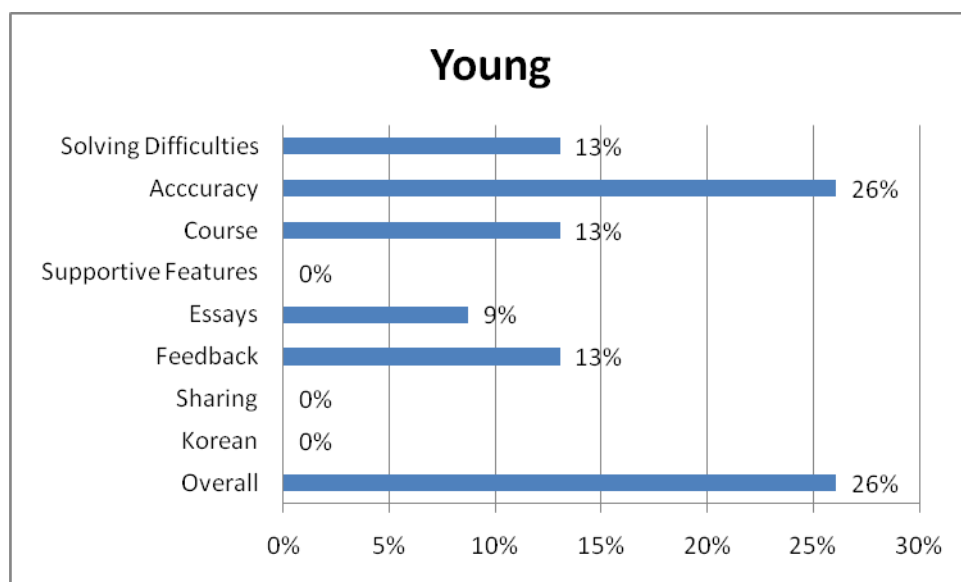


Figure 5.17. Young's positive post-responses toward e4writing. Note: Supportive features in this figure include Statistic Log, Word Neighbor, Grammar Guide, Practice, and Board. Solving difficulties indicates how much e4writing helped students to solve their initial lexico-syntactic difficulties at the beginning of the course.

Nevertheless, it is difficult to determine how much *e4writing* contributed to the actual improvement of accuracy in his English writing. It was noted that he felt that lessons in class helped him remember grammatical features “during writing” more so than the direct error feedback of *e4writing*. Even though his confidence in English writing increased, and his actual performance in this study improved, it also is difficult to determine whether his grammar improved since he still felt difficulty understanding English explanations in *e4writing*. It should be noted that *e4writing* was developed to help students increase accuracy in English writing not increase grammatical or lexical knowledge.

Case Study 4: Lia

Student Academic Profile and Needs Analysis

Student academic profile

Lia was a shy person and did not like to speak in front of the other students. When she was asked to speak in class, she answered in whispers. As she was the one who always sat in the front row in the classroom, I could see easily what she was doing in class. While the class revision activities were taking place in groups, in pairs, or individually, Lia seemed to hide her answers. When I asked her to show her worksheet, she looked like embarrassed and often responded “I think it’s [my answer is] wrong” or “I’m not sure of it.” Her passive behaviors and answers in the beginning of the course made me think that she was very introverted and felt uncomfortable interacting with the teacher.

On the other hand, Lia attached a brief memo of her thoughts about the assignments at the bottom of her assignments. The following is a memo from her first assignment.

I’ve never written in English within 30 minutes before, so it took me a lot of time doing this assignment. I spent a lot of time thinking ideas and revising this again and again. I did my best in this assignment but still think it isn’t good enough. But at the same time I feel satisfied with myself. I’ll do my best next time~

In addition, a few weeks later, I found that she seemed to feel more comfortable talking and asking questions in person before and after class. The close physical proximity between her and me in class and her memos seemed to help build a good rapport between the student and the teacher.

The reason she took the writing course was to improve her English writing for a future job. She wanted to become either an English teacher in a kindergarten or a

company. She had studied English for 10 years since junior high school. She stated that although she spent a lot of time preparing for TOEIC exams as her desired job would require a high score as well as most companies in Korea require a certain TOEIC score, she felt frustrated with that her highest TOEIC score was 560 out of 990. In addition, she found that the teacher employment examination required a different type of score to be a public school teacher: an academic writing score as well as a subject area, English education. Since she was a senior, she soon had to fulfill the requirements for the double major and she was focusing on her English Education courses. The combination of the low TOEIC score and the English-centered courses seemed to make her “anxious” about English.

The background survey showed that she liked English writing moderately well and wrote three times per month for writing exercises. However, Lia showed anxiety, depression and low self-esteem toward English writing as well as this writing course in the beginning of the course. After the first lesson, she showed her will to improve her English writing asking me “If I’d like to learn English writing by myself at home what else I can do?” “Do you think writing a diary helps for my writing?” “What do you think about Korean-English translation for English writing?” and so on. Lack of grammar and vocabulary knowledge as well as no experience with academic English writing burdened her. However, as seen in the following excerpt from her first reflective journal, she also showed a positive attitude toward the writing course.

When I took this course at first, I was very afraid of English writing because I’ve never learned writing. And when you informed about the course work, the schedule and the assignments, I was worried thinking that ‘am I able to do this?’ Many people learning English warned me that English writing was harder than listening, speaking, and reading because it requires more accuracy and fluency. So, I thought that I’d rather drop off this course as I’m not good at grammar, and I don’t even know English word order well. However, I changed my mind and make a decision to take this course as I thought it would be a great chance. I thought

I would not learn English writing forever if I was afraid of it. I trusted you and made a decision to keep going. (first reflective journal)

Her low task self-esteem about English writing was also revealed in the first interview. She evaluated her current English writing as “poor” and at a “beginner” level. She felt like “there is a wall in front of her” when writing in English. The most difficulty was that she thought that she had trouble expressing clearly what she wanted to write. She thought that fluency was more important than accuracy in writing. She stated that even when writing in Korean, she usually invested lots of time thinking about ideas, and developing and organizing paragraphs. However, she found that she could not meet her desire in fluency without the support of accuracy.

At first, I wanted to use a variety of expressions, you know, fluently. But it didn't work. I wanted to use this grammar for it. But, I realized that that didn't work out well to express what I want to write. (first interview)

The demographic survey showed that she usually used computers and Internet for one hour per day for schoolwork, and Internet surfing. She preferred a pen-and-paper method for English writing.

Perceptions of initial difficulties with grammar

With regard to grammar, the most difficulty she perceived was a lack of knowledge of English structures such as word order. She translated from Korean to English in order to write in English. She read a Korean translated version of English reading, tried to translate Korean into English and then compared the original English reading material and her English writing. This method did not last long since she felt frustrated that the grammatical structures she used were quite different from those in the original English materials.

Well, when I should write, I think contents first like ‘what to say’ and then translate to English. I felt difficult translating structures, like word order. So,

actually I keep writing, removing, and rewriting. It didn't work. My grammar and words were different. I got frustrated. (first interview)

Moreover, she felt depressed when she found that the grammatical knowledge she had acquired was not enough, as she believed that she had spent a great time studying English over time. Grammar and reading were the foci of her English studying. While studying for TOEIC test preparation and reading advanced materials seemed to help her in a way, she felt depressed when her book knowledge of grammar did not help her with her actual English writing.

I realized that my school grammar I have learned was poor. And I too much focused on translation English to Korean when reading so I couldn't pay attention to English word order. What I have learned didn't meet either accuracy or fluency, both of which were essential in English writing. I got disappointed with myself and got depressed a lot. (first reflective Journal)

Perceptions of initial difficulties with vocabulary

Lia revealed that she also felt vocabulary was difficult. Lia excerpted expressions she thought they were useful from reading materials and used them in her English writing. Also, she used a Korean-English dictionary installed in her cellular phone when she needed to look up words. The dictionary provided limited information, one or two meanings without context. The chopped expressions and decontextualized words caused her to create awkward or ill-formed sentence structures. Lastly, she stated that she needed to pay more attention to words when learning grammar and reading.

I usually refer to expressions that I noted when reading. Or, if a familiar expression comes up in my mind, I look up the expression. If there is an expression I'd like to use, I simply copy a phrase not a sentence or a clause and apply it into my writing. This is helpful in some ways. At least, this helps me to deliver my intention...For vocabulary, I don't have an electronic dictionary and use a dictionary installed in my mobile phone. You know, it has the function. When I'd like to use an advanced English word, I search for it in the dictionary. But, it doesn't sound weird or make sense. (first interview)

Perceptions of *e4writing*

*Early (second week) perceptions of *e4writing**

Overall, Lia had high expectations about *e4writing* in her first reflective journal. She noted that my first instruction about *e4writing* gave her very a strong impression about *e4writing*. She thought *e4writing* would useful and practical to increase her accuracy. Due to her anxiety and worries about English writing, she greatly expected that a “new approach” (web-based writing assistance) to English writing might meet her needs. Her difficulties with words, structures, and word order could be corrected, and clear explanation about errors would be provided. Particularly, the online essays were expected to increase her performance in accuracy as well as her error awareness.

I think it's very practical as one click access enables me to get the information what I want to know. I felt like 'oh! This is what I want!' Even though I try to learn English writing by myself, I feel terrible if I can't realize my errors in words, grammar, and words, and keep moving. However, I feel more relieved thinking that *e4writing* will provide immediate, accurate feedback and that it will help me be cautious about potential errors by practicing with a lot of essays. (first reflective journal)

The first interview revealed that she showed positive attitudes toward others' essays. She stated that well-chosen words and well-formed structures in the essays might present her with good examples. She reviewed the marked online essays she and her peers wrote and stated that a variety of correct expressions in the online essays her peers wrote might be beneficial to her. She tended to use easy words that she knew how to use in context. Even if she had known the meanings of an advanced word, if she did not know its usage in context, she tended to replace the advanced word with an easier or more familiar word. Moreover, she expected that the resources, and in particular the 80 online essays, might help her increase fluency.

I think it would help for accuracy. Well, I think the ideas look similar on the essays but expressions are different. There could expressions that I'd like to use. I think it would help me for accuracy. And, if the student used the expression on his essay that I wasn't sure of, I could learn from his essay. (first interview)

I think *e4writing* has a lot of resources and they would practically help me utilize some ideas on the essays and provide me with lot of examples contain well-formed grammar and word order. (first reflective journal)

She also anticipated was that she could learn authentic language through error feedback. Noting her difficulties with vocabulary, she expected that the error feedback from a native speaker could very beneficial to her vocabulary skills.

On the other hand, she revealed a negative attitude toward the indirect feedback on the marked essays. From the first interview, it was found that she thought the indirect feedback might not provide her with much help as it did not provide understandable explanations.

There are the explanations but I don't understand them, why it's wrong? especially, for word order. I made an error for "because" before, but it didn't tell me why this was wrong. (first interview)

Positive perceptions of e4writing at the end of the course

Generally, Lia displayed positive responses to the features of *e4writing*. The main reason for her positive attitudes was that *e4writing* was the only assistance to increase accuracy in her English writing and that she felt it helped her improve. The overall benefit of *e4writing* mentioned by Lia was the anytime-availability of the *e4writing* recourses. She stated that this convenience enabled her to refer to the unmarked and marked essays whenever she wanted. Both types of essays were helpful to improve her accuracy. The unmarked essays motivated her to increase accuracy as well as fluency in her English writing. In particular, the marked essays helped her to reduce common errors.

It helped as I often got into it. Whenever I get into it, I check mine and my friends' essays. Oh, if this assignment is like this, always, I always get into it to see the essays and remind me of that 'oh, this is should be corrected this time'. This is what I have done. (second interview)

Both of the unmarked essays creatively, logically written with a few errors and the unmarked essays illogically written with lots of errors motivated me to write accurate, creative, and logical essays. Next, the marked essays enabled me to receive the feedback of the errors I or the others made, for both grammar and words. They helped me to recognize the common errors people made, to reduce them, and to choose words appropriate in contexts. (second reflective journal)

The reason why she believed the marked essays benefited the improvement in both grammar and vocabulary was the direct feedback and the indirect feedback. In the beginning of course, she stated that she felt that understanding the indirect feedback was difficult due to its unfamiliarity. However, the second interview revealed that she felt more comfortable with and understood the indirect feedback better than before. She stated that immediate corrections and explanations demonstrated through the pop-up windows helped not only resolve her questions about appropriate usage but prevented her from repeating the same errors. She added that this meaningful feedback helped her retain her error awareness longer.

Direct feedback was the way to see grammar and word errors at a glance. It did not force me to memorize by suggesting the correct answers. Instead, it provided me with the brief explanation of why it is appropriate or not and encourage me to use the correct ones. Hence, it helped me remember them in the long term. (second reflective journal)

In particular, the second interview revealed that she thought that the direct feedback was more beneficial for increasing grammatical accuracy in her English writing than vocabulary. First, while the direct feedback provided correct answers for both grammar and vocabulary, the indirect feedback provided understandable explanations for grammatical errors but not for vocabulary errors. Instead, *e4writing* prompted her to refer to Word Neighbor in order to show how a certain word was used in a variety of context.

The absence of the understandable explanations and inconvenience of the use of Word Neighbor caused her to think that the direct feedback was more helpful for grammar than for words.

I think it helped me for grammar more than vocabulary because I had to search for something for words by myself in *e4writing*. I don't get it if only I refer to the popup window for words. (second interview)

However, it was noted that she gained some benefits from Word Neighbor. She mentioned that Word Neighbor provided reliable resources as well as a variety of examples and enabled her to increase understanding of the use of words in context.

I think Word Neighbor was useful as it's easy to use it and there are credible, accurate resources in it. Once I start to use it, it makes me keep searching for another and another. It was helpful because it provides me with a lot of expressions, and helped me naturally learn words in contexts. I could learn how to use words in what contexts. (second reflective journal)

Negative perceptions of e4writing at the end of the course

Lia also had a negative attitude toward the Grammar Guide. She stated that she hardly used it and that it was discouraging. The following excerpt revealed that she showed a contradictory perspective toward Word Neighbor and the Grammar Guide. She clearly stated the resources Word Neighbor provided were useful in the above excerpt but those in the Grammar Guide were not although both were written in English.

Lia (L): Um...Ur...Well, I don't like the Grammar Guide. I understand the examples in it, but you know, the explanations would be better to help my writing, if they are in Korean. That's what I've been thought.

Teacher (T): Do you feel difficulty with it because of English?

L: Yes, all are in English.

T: Feel Uncomfortable?

L: Yes.

T: So, you think it would be better if the explanations are given in Korean, and the examples are in English.

L: Yes, yes. It would help me understand them. I tried to understand through the examples, which are trustable and helpful. But, the explanations don't look like. (second interview)

The resources in Word Neighbor contained academic articles in various fields such as education, society, history, engineering and so on, but the resources in the Grammar Guide included meta-language to describe language structures. Noting that she was familiar with advanced college reading in English and with TOEIC grammar in Korean, she apparently felt more comfortable using Word Neighbor than the Grammar Guide due to content familiarity.

Another negative attitude concerned interaction. She thought online assistance without any physical contact tended to make people lose their motivation easily.

You know, it takes time to improve English writing. Actually, it's true that *e4writing* is useful and I can use it whenever I need. But, if I don't use it in the long time, I mean, I think it will truly helpful only if I use it in the long time. But, if you pay for error correction, like to a native speaker, I don't know how to say, well, the error correction will work longer. Let me think....If you ask to a native speaker, you should spend time and money, and I think this will make you remember in the long time. (second interview)

Suggestions for improving e4writing

As Lia felt uncomfortable with using the Grammar Guide, she suggested that the Grammar Guide should include Korean explanations to increase understanding of the content. In addition, considering that she felt that if the indirect feedback had been provided in Korean, it might have helped her clearly understand the explanations of errors and motivated her to more actively use the feature.

Well, um...I think, um.. Now that I'm learning in class, I could relate what I've learned to the feedback, the feedback still brief though. I understand the feedback, but you know, at first, 'what is this?!' There was something I couldn't understand then. I didn't know why it (*e4writing*) corrected this and used the corrected one as it said. Now that I'm learning why, I could understand what the feedback said. I was embarrassed at first. (second interview)

Performance on Assignments and Tests

The effects of e4writing on writing assignments

Sharing the online essays with others seemed to help Lia pay attention to errors as well as the content of the essays. Lia said that she wanted to do her assignments well and spent a lot of time writing them since her peers could review her assignments through *e4writing* as she reviewed theirs. She also implied that it was important for her to receive a favorable evaluation from others.

In general, Lia demonstrated better performance throughout the 8 writing assignments than the others in the LA group. The average of total words in the assignments was 250.1 (see Table 5.7), which was above the average in the LA group (204.9 words) and in the HA group (216.5 words) (see Table 4.7). In addition, in terms of the error ratio, she showed high accuracy in her essay assignments. The average error ratio in her assignments was 15%, which was lower than that in the LA group (21.6%) and comparable with that in the HA group (14.9%) (see Table 4.7).

Table 5.7

Results of Writing Assignments of Lia

Assignment	Total Words	Error Frequency	Error Ratio (%)
1	200	41	20.5
2	215	49	22.8
3	217	20	9.2
4	221	33	14.9
5	171	15	8.8
6	239	43	18
7	363	57	15.70
8	375	28	7.5
Average	250.1	35.8	15

Figure 5.18 shows that accuracy in her English writing improved. Compared to the error ratios in the first two assignments (20.5% and 22.79% respectively), the error ratios in the last two assignments (15.7% and 7.47%) decreased.

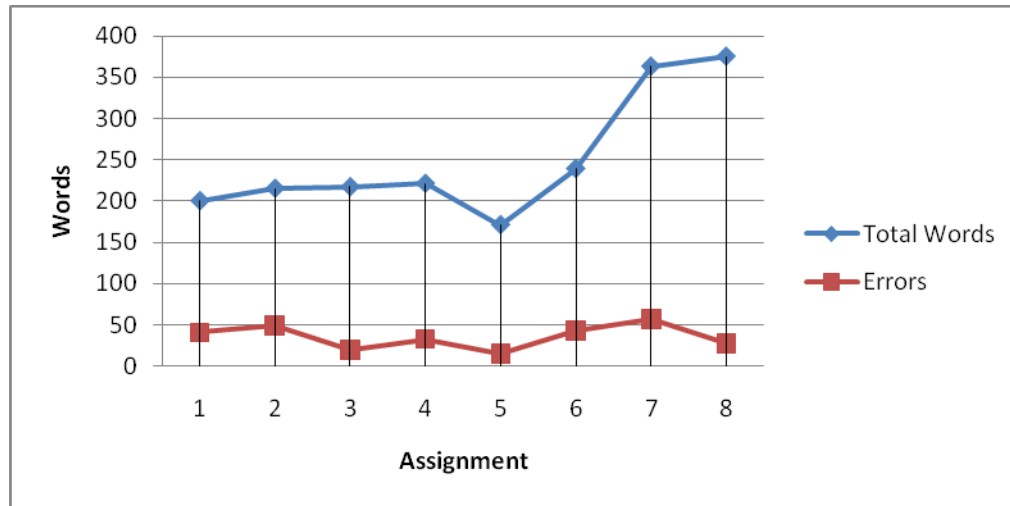


Figure 5.18. Changes in Lia's assignments.

Lia tended to repeat the same words or phrases in her assignments. Also, one of her frequent errors was the usage of pronouns such as “it” and “they” in the beginning.

Figure 5.19 shows that she sometimes used “they” unclearly.

Also, Workers should do things that they do not want to do in order to earn money and promote in the future. Like these situations, people will some times have to do many things that they do not enjoy doing. Because they are sometimes necessary. Therefore, I think that if they are necessary things, although they are things that we do not enjoy doing, we should do them. After all, through them, we will be able to have many experiences and learn many things in life.

Figure 5.19. A passage from Lia's first assignment.

On the other hand, her last assignment showed that she used redundant words less often and “they” more correctly (see Figure 5.20).

First, three advantages of living in university dormitories I am going to discuss are cost, studying, and relationship with friends. If students live in university dormitories, they would not need transportation expenses to and from their school and could reduce food expenses because university dormitories provide students with cheap meals. Some students who live in a dormitory may also study well because they can often go to their school library when they want to study and easily obtain some useful data in the library. In addition, the last advantage is students can make many new friends in their dormitory, and students can depend on each other instead of their family.

Figure 5.20. A passage of Lia's eighth assignment.

The effects of e4writing on writing tests

Lia demonstrated an improvement in accuracy compared to the others in the LA group. All results, including the total words (131 words), the error ratio (35.9%) and the TWE score (3) in the pretest (see Table 5.8), were comparable with those in the LA group (126.4 words in total, 38.8% error ratio, and 2.9 TWE) (see Table 4.8). However, her accuracy (19.4%) and holistic evaluation (4) in the posttest was superior to the group average (30% error ratio and 3.5 TWE score). These figures in the posttest were comparable to those in the HA group (see Table 4.8).

Table 5.8

Results of Pretest and Posttest for Lia

	Total Words	Error Frequency	Error Ratio (%)	TWE Score
Pretest	131	47	35.9	3
Posttest	155	30	19.4	4

Lia also demonstrated an improvement in accuracy from the pretest to the posttest. The error ratio on the posttest, 19.4%, showed a decrease of 45.9% in comparison with that on the pretest, 35.9%.

Figure 5.21 shows Lia's essays from the pretest and posttest. While comparisons of assignment one and eight showed a decrease in the amount of redundant words, she

still used redundant words. Missing determiners was the most frequent error on the pretest but there were no missing determiners on the posttest.

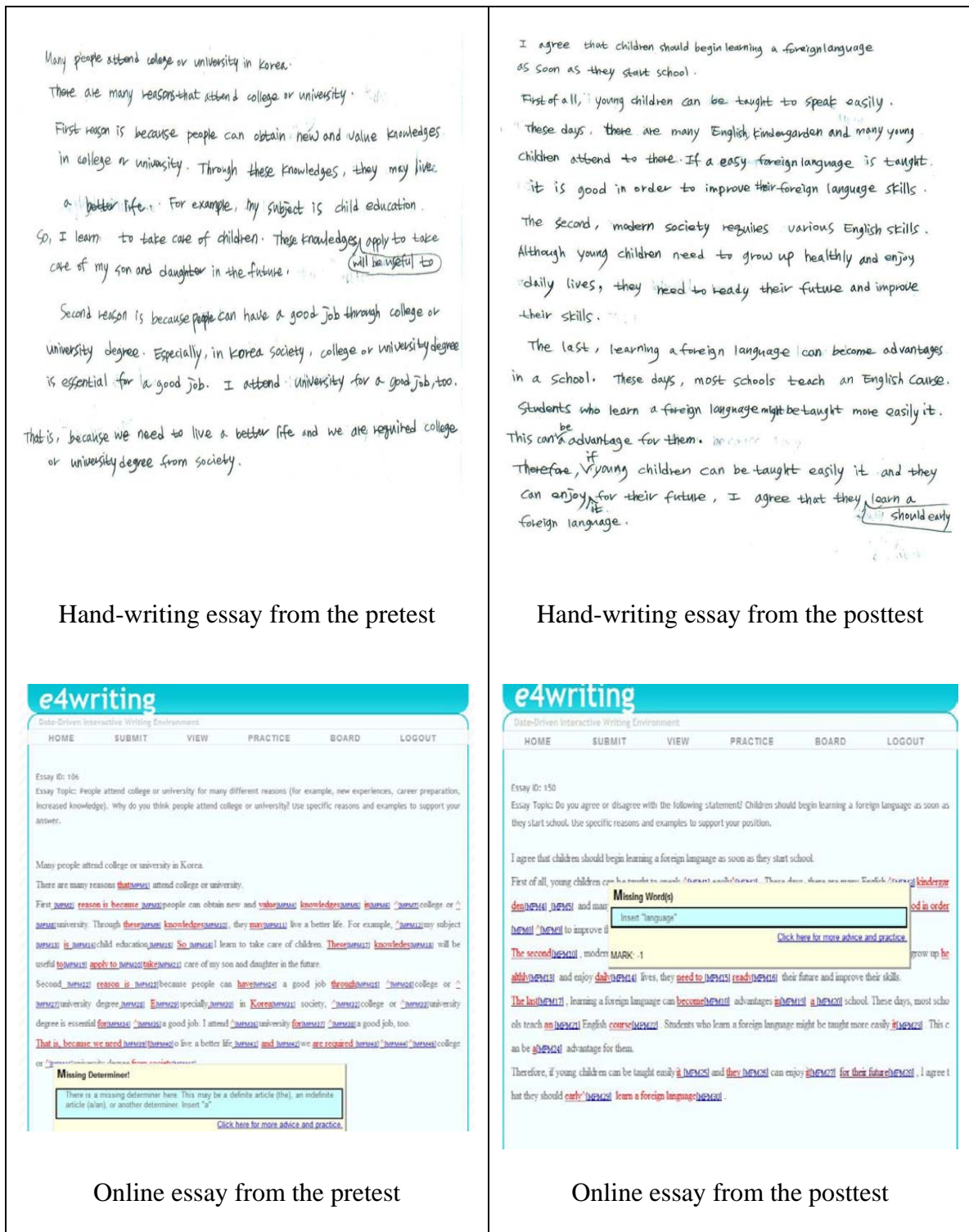


Figure 5.21. Lia's essays from the pretest and posttest.

Overall Results from Qualitative and Quantitative Analysis

The improvement shown throughout the eight assignments and the tests indicated that Lia was much concerned about accuracy. Of the four students, she experienced the most difficulties. Given these difficulties as seen in Figure 5.22, her achievement was notable.

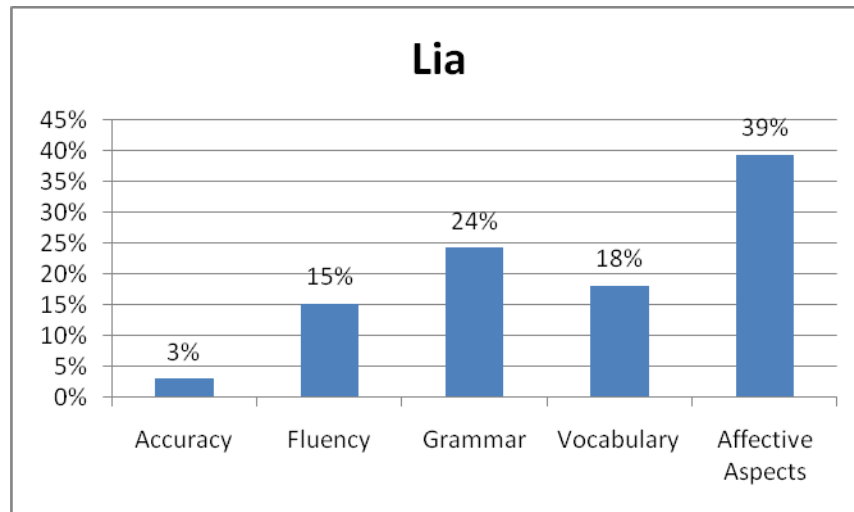


Figure 5.22. Lia's difficulties with English writing.

Moreover, as displayed in Figure 5.23, Lia was concerned about errors and tried to avoid making errors (Accuracy: 15%). Also she thought *e4writing* helped her resolve her difficulties with both grammar and vocabulary (Solving Difficulties: 14%). The positive results of the assignments and the tests seemed to support her statement that her increased error awareness helped her improve her accuracy.

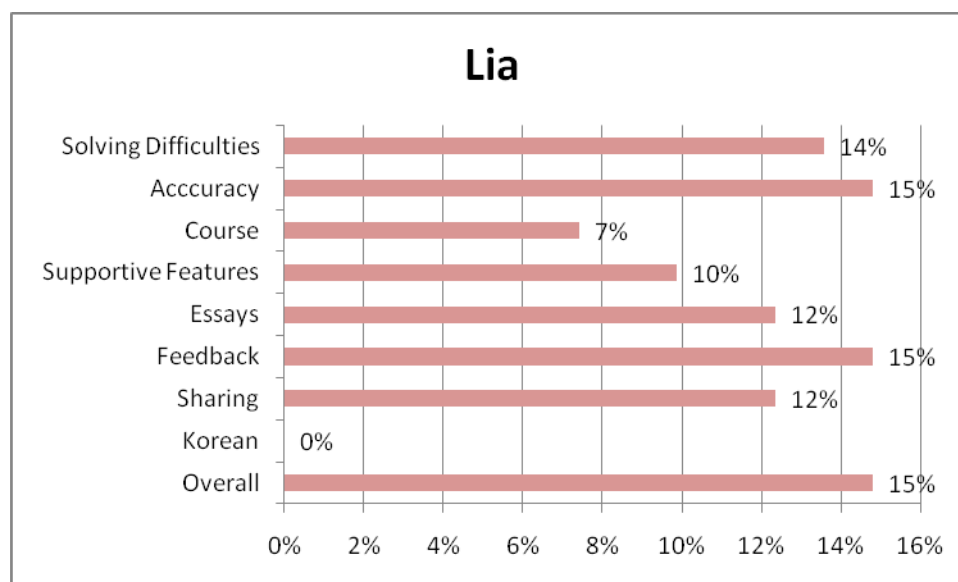


Figure 5.23. Lia's positive post-responses toward *e4writing*. Note: Supportive features in this figure include Statistic Log, Word Neighbor, Grammar Guide, Practice, and Board. Solving difficulties indicates how much *e4writing* helped students to solve their initial lexico-syntactic difficulties at the beginning of the course.

Her familiarity with the indirect explanation of grammatical errors increased as the lessons proceeded. Her improvement in accuracy confirmed her statement that the error feedback in both direct and indirect ways helped her. Moreover, the improvement in accuracy in the tests supported her statement that the error feedback helped her remember the corrected errors for a long time.

At the same time, the second interview revealed that the familiarity with the TWE essay format was increased as she kept writing the assignments. She became accustomed to developing and organizing ideas.

Well, as I kept writing, I found the formats are similar. So, you know, the first one was quite a new format to me but the next one was not, um. I think the topics ask like 'which one I prefer' and ask similar patterns. I have kept writing and knew how to do. That also helped me. (second interview)

An analysis of the qualitative and quantitative data revealed that Lia was concerned about grades (see Figure 5.11). She did not have any negative comments about

e4writing in her two reflective journals. Also, she did well on her eight assignments. However, the both interviews revealed that she had negative perspectives of *e4writing*. It seemed that she thought negative comments in the journals, the parts of the evaluation stated in the course syllabus, might affect on her grades. It was assumed that she gave over-positive comments about *e4writing* being ‘highly helpful’, ‘big help’, ‘that’s what I have wanted’ and so on. The researcher’s reflective notes supported this assumption. She mentioned that she only used the structures that she clearly understood to avoid receiving a low grade on the essays. Furthermore, she tended to avoid taking risks. This tendency caused her be more careful about accuracy in the posttest, which resulted in the slight decrease the total words in the test.

Cross-case Analysis

In this section, I illustrate a cross-case study that draws together the overall phenomena across the four cases. Specifically, I describe (a) similarities and differences in four cases, (b) similarities and differences between the HA group and the LA group, (c) similarities and differences between the HA group participants and the LA group participants, and (d) perception changes in the four cases.

Similarities and Differences in Four Cases

Similar and different perceptions regarding difficulties with English writing and *e4writing* experiences among the students were identified in the analyses. As seen in Figure 5.24, the degree of and the type of the difficulties the students perceived were various but they commonly felt that fluency and grammar were difficult.

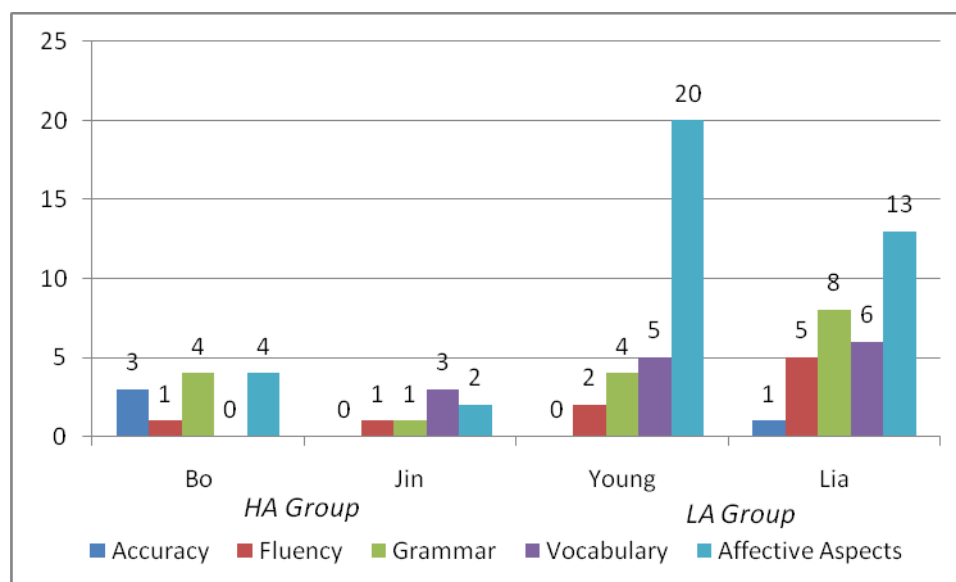


Figure 5.24. Difficulties with English writing in the four participants.

Four students (Bo, Jin, Young, and Lia) revealed their difficulties with grammar and vocabulary. First of all, all of them felt difficulty with expressing their thoughts fluently. The descriptive data revealed that the definitions of fluency they had varied from one to another and that they had different difficulties.

Bo seemed to think that writing fluently meant writing like native speakers, including using idioms, prepositions and verb phrases. He also thought that the translation from Korean to English might prevent him from acquiring and appropriately using these items. Jin considered that writing fluently consisted of including well-developed ideas and content, and logically, coherently organized sentences and paragraphs. Thus, she reported her greatest difficulty was word-choice as she believed that well-chosen words efficiently delivered her message. Young, on the other hand, regarded fluency as well-translated sentences from the L1 to the L2. He tried to translate each word that he thought of in Korean to English. For his definition of fluency, he felt that vocabulary was important. If Young's definition of fluency was word-level fluency,

Lia's fluency was defined as sentence-level fluency. She also tended to translate from the L1 to the L2, and felt difficulty with both grammar and vocabulary.

All of them thought grammar structures played an essential role in delivering their thoughts. They also felt that fluency and grammar were difficult. Young did not have a very basic knowledge of grammar and meta-language, which caused him to become frustrated with grammar. Bo and Lia struggled with applying their own knowledge of grammar to real-life writing situations, and their book knowledge made them feel easily depressed. Lia thought grammar was difficult as she had many grammatical errors in her writing.

Another similarity was found across the four cases. Anxiety, depression, and low self-esteem were identified and classified as affective difficulties. Most students felt anxious. In general, they rarely experienced either English writing or formal academic writing. Moreover, given the educational context of English in Korea that they had experienced (instruction emphasized rote memorization of grammar and vocabulary and sentence-level translation), it may be no wonder that they felt anxious over English writing, fluency and accuracy.

The students also had different approaches to resolve their own difficulties regarding grammar and vocabulary. To overcome vocabulary difficulties, Jin looked words up in a Korean-English web-dictionary. The others used reading. However, the reading materials were completely different from one another. Bo and Young, who thought 'fun and interest' were important in learning, read novels and comic books, while Lia read advanced college reading materials.

In terms of *e4writing*, all the students generally showed positive attitudes toward *e4writing* at the beginning of the course. Their reason was that *e4writing* was a new approach for English writing. In particular, Bo, Jin, and Lia had high expectations about sharing essays. They expected that the essays would include grammatical and lexical corrections and that would motivate them to avoid making errors. They thought the online essays might be good resources to gain ideas for TWE topics and a good tool for assessing their writing.

Jin, Young, and Lia mentioned they felt the explanations provided by the indirect feedback were not sufficient. Jin was eager to build vocabulary skills through the feedback and Young and Lia had difficulty understanding the feedback. Bo felt excited about *e4writing* as he revealed more positive responses than the others but no negative responses toward *e4writing* in the beginning.

At the end of semester, all the students reported that they had benefited the most from direct feedback, that they felt that their accuracy awareness was increased, and that *e4writing* helped them improve grammatical accuracy. On the other hand, they showed different responses to the other features of *e4writing*. Bo, Jin, and Lia noted that they received help from sharing the online essays. In addition, they stated that indirect feedback helped them further understand grammatical errors. However, Young did not benefit from these features. Due to his limited English proficiency, it seemed that he used *e4writing* infrequently. Nevertheless, Young stated *e4writing* was beneficial as a ‘formative assessment tool.’ However, Bo was negatively influenced by the error comments and felt depressed with the error comments at the end of the course.

Figure 5.25 presents these changes in their positive and negative perspectives toward *e4writing*. Bo's attitudes represented the most notable exception.

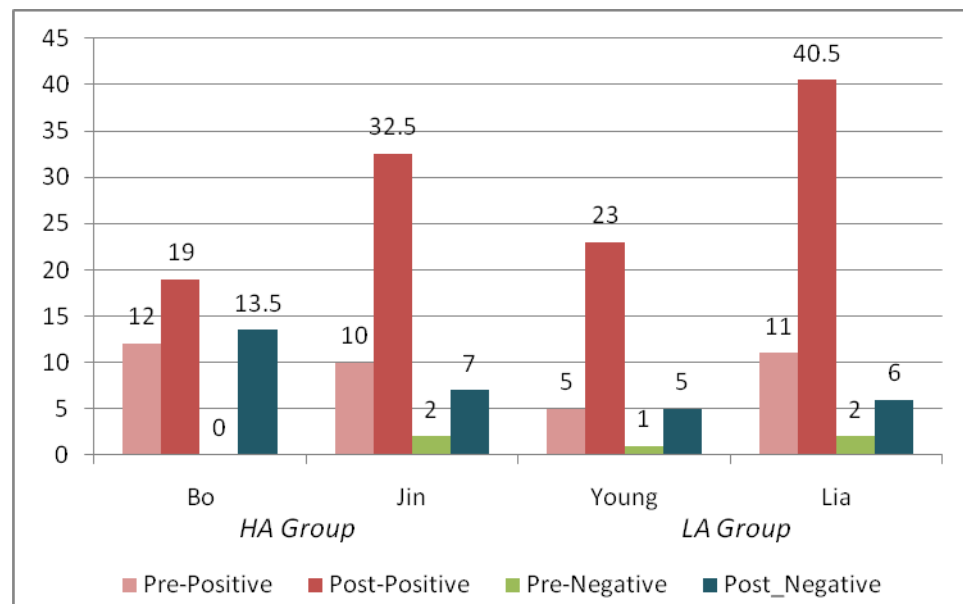


Figure 5.25. Differences in pre-and-post responses in the four participants.

Additionally, it was not only Young who felt uncomfortable using *e4writing* due to limited English proficiency. Bo, Young and Lia had difficulty using the Grammar Guide and suggested that the Grammar Guide could be provided Korean. However, Jin suggested that *e4writing* could provide more explanatory feedback in English.

Different perspectives were also found in their attitudes toward the writing course. According to the qualitative data, the offline writing course enabled Jin to develop vocabulary skills, Young to increase awareness of accuracy, and Lia to understand English explanations from the indirect feedback. The writing course rarely delivered lessons focused only on grammar but Young and Lia indicated that the class revising activities were beneficial, followed by grammar explanations. These similarities and differences are summarized in Table 5.9.

Table 5.9

Similarities and Differences among the Four Participants

	Similarities	Differences
Difficulties	Desire of fluency Grammar Difficulties Anxiety over English writing, fluency and accuracy	Definition of fluency Choice of reading materials
Expectation of <i>e4writing</i>	Overall positive perspectives	Sharing Essays Insufficient Explanations in indirect feedback
Later perspectives of <i>e4writing</i>	Direct feedback Awareness Increased Assistance for Grammar	Sharing Essays Indirect feedback for grammar
Others		Grammar Explanation in Korean Support of offline course

Furthermore, these similar and different perspectives presented by the four students explained the changes of the students' performance from the pretests to the posttests. Figure 5.26 displays the changes in total words and error ratios. Bo was the only one who demonstrated an increase in error ratio (10.8%). From his negative and critical attitudes shown throughout the second interview and his second journal, it was hypothesized that he did not benefit from *e4writing* as much as the others were. He was vulnerable to error feedback that did not include any positive comments. Jin showed a decrease in error ratio (14.1 %). Jin utilized all the features in *e4writing* except for Word Neighbor and showed positive responses to the marked/unmarked essays, direct/indirect feedback, Practice, the Grammar Guide, and the Statistic Log. Although Young did not benefit from others' online essays and rarely used the other features except for the direct feedback, he demonstrated a decrease in error ratio (42.9%). It was hypothesized that the confidence he gained through *e4writing* was the main cause for this achievement. The most notable decrease in error ratio (45.9%) was by Lia, who also used others' marked

essays, direct/indirect feedback, and Word Neighbor and exhibited positive attitudes toward them. Therefore, of the four participants, the participants who showed more positive attitudes toward *e4writing* demonstrated the better performance in accuracy and the participants who felt they had more difficulty with grammar and vocabulary.

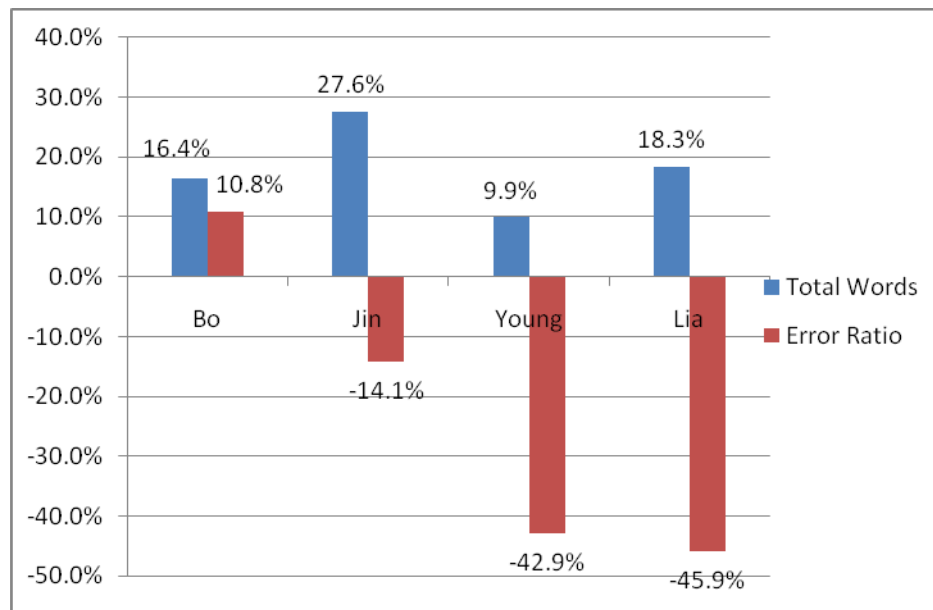


Figure 5.26. Changes of the four participants between pretests and posttest.

Similarities and Differences between the HA Group and the LA Group

Similarities and differences between the HA group and the LA group were also identified. First of all, the HA group demonstrated confidence in English grammar while the LA group showed anxiety, depression, and low self-esteem over grammar and vocabulary. Bo and Jin in the HA group had more experience learning English and had positive attitudes toward English and English learning. They exhibited a desire for improving their English writing at the beginning of the course. Both were aware of that they must possess excellent writing skills to teach secondary school students.

Bo: I think I need further efforts to improve English writing and to improve overall English proficiency rather than to merely increase TOEFL scores in order to help my future students solve their difficulties based on my experiences. (first journal)

Jin: I think teaching English writing is not possible until my writing skills are developed enough to teach students. (first journal)

With their long-term goals, they spent a lot of time studying English. Bo studied English in New York for one year and Jin stated that she had been studying English continuously for the past three years. Their instrumental motivation to improve English writing skills seemed to positively affect their confidence with English grammar.

On the contrary, the LA group revealed anxiety, depression, and low self-esteem. Compared to the two students in the HA group, Young and Lia had less experience learning English. Young had very negative attitudes toward English and ways of learning English (e.g., memorization). In addition, while Bo and Jin in the HA group wanted to become teachers in secondary school, which requires passing the Teacher Employment Examination, Young and Lia wanted to have different jobs. Young wanted to work in the music field and Lia wanted to work at a company or in a kindergarten as an English teacher, which does not require any official examination. Lack of experience in English writing and lower instrumental motivation for English writing related to job seemed to lead them to have affective difficulties.

Differences in experiences with *e4writing* were identified between the HA group and the LA group. The two students in the HA group utilized Practice to improve their accuracy. They stated that the sentence-level practice was useful for recognizing errors, correcting them and to testing their grammatical knowledge as “formative assessment”. They pointed out the limited number of exercises and wanted Practice to provide them with grammatical explanations about errors. However, the LA group rarely used Practice.

They stopped using Practice as soon as they realized that it was not helpful to them. The LA group's limited knowledge of grammar seemed to prevent them from recognizing and correcting grammatical errors while the HA group's confidence with grammar seemed to encourage them to find and correct errors

However, it was found that the LA group utilized the direct feedback more often than the HA group. Also, the instant feedback on errors helped them increase their error awareness and reduce the errors they repeatedly made. The affect of the direct feedback on the improvement of accuracy in their English writing was identified by their performances on the pretests and posttests. The decrease of the error ratios in the posttest (see Figure 5.26) demonstrated that the direct feedback positively influenced the LA group more than any other features of *e4writing*. The HA group reported that the direct feedback was helpful as well. However, given the lower figures of the HA group's responses to the direct feedback, the HA group seemed to benefit from global use of the *e4writing* features. Although Bo's performance on the pretests and posttests did not show a decrease in error ratio, it should be noted that he felt his awareness of errors was increased.

With regard to accuracy, the LA group demonstrated more improvement from the pretests to posttests (see Figure 5.26). However, Bo did not. Young and Lia in the LA group increased their accuracy in their posttests. Although the LA group used *e4writing* less than the HA group did, they exhibited more achievement. Since they had anxiety, this confidence might help them to perceive the error feedback as positive feedback. The similarities and differences between groups are summarized in Table 5.10.

Table 5. 10

Similarities and Differences between HA Group and LA Group

	HA Group	LA Group
Difficulties	Confident in English Grammar	Low affective aspects
<i>e4writing</i>	Assistance of Practice	Hardly used Practice
	Suggestion for Practice	
	Assistance of Direct feedback	More assistance of Direct feedback
Pre-Post Tests	Improvement in accuracy	More improvement in accuracy

Similarities and Differences in HA Group Participants and in LA Group Participants

Similarities and differences in participants in each group were revealed as shown in Table 5.11 and 5.12. Both Bo and Jin in the HA group much paid attention to one of the features of the online essays over the course: essays written by Korean college students. They thought these essays might be more beneficial than ones written by English native speakers or other EFL students as the Korean essays included similar grammatical and lexical errors that they might make. Familiarity with the essays might help lower their affective filter. They thought it encouraged them to notice errors (identifying errors), increase error awareness (consciously making efforts to avoid making errors), and eventually improve in accuracy (reducing errors) in their English writing.

There are differences between two students. While Bo did not have any difficulties with vocabulary, Jin felt that word-choice was difficult. In addition, while Bo revealed his confidence with grammar, Jin exhibited her lack of confidence in English writing. However, it turned out that Bo revealed that he had difficulty with grammar through his assignments and tests. On the other hand, the results of Jin's assignments and tests indicated that she was an advanced learner. Although she made errors in her writing,

she did not repeat the same errors, which possibly means that her prior knowledge of grammar helped her acquire new knowledge from error feedback. That Bo did not show any difficulty with vocabulary was interpreted as being due to his inability to reach to an advanced level, a level where a learner wants to clearly articulate his or her ideas. Jin's lack of confidence was probably due to high expectations for English writing. She had good control of a full range of grammatical structures and a very wide general vocabulary and she wanted to overcome her difficulties with conveying the subtlety and nuances of writing at the advanced level.

The differences between the two students were found in their responses to the Grammar Guide. Bo exhibited uneasiness with the Grammar Guide provided in English like Young and Lia in the LA group, whereas Jin showed positive attitudes toward it. His actual knowledge of grammar might be lower than his assumed knowledge and he still felt more comfortable with grammar explanations in Korean due to his prolonged exposure to grammatical explanations in Korean.

Another difference was about technology. While Jin stated that she did not feel any inconvenience using *e4writing*, Bo stated that *e4writing* needed management support for individual users and an eye-catching design. He appeared to think that online learning assistance needs to motivate learners to maintain their interest and attention.

Table 5.11

Similarities and Differences between Participants in the HA Group

	HA Group	
	Bo	Jin
Similarities	Belief in assistance of Korean students 'essays	
Differences	Not show difficulty in vocabulary	Vocabulary is most difficult
	Overconfident	Lack of confidence
	Uncomfortable with Grammar Guide	Help from Grammar Guide
	Suggestions for technical sides for <i>e4writing</i>	No inconvenience of <i>e4writing</i>

Similarities and differences between Young and Lia in the LA group were also seen as shown in Table 5.12. One common trait they had in English writing was applying communication strategies to writing. They tried to compensate for the language difficulties generated by their limited knowledge of grammar and vocabulary and to lower their affective difficulties they felt (e.g., anxiety, depression, and low self-esteem). Bo used circumlocution, abandoning the message, and topic avoidance. Lia switched words and avoided uncertainty. Compared to Young, Lia applied avoid-risking strategies.

Another difference between the two was revealed. Young showed less interest in course grades than others. He tried to write the assignments within 30 minutes although all the students were allowed to write without a time limit. While most of the students tended to spend more time doing assignments to improve their fluency and accuracy and receive better grades on them, he wanted his assignments be assessed like the tests even if he got low grades on them. On the other hand, Lia stated she has more interest in grades than others. She seemed to overestimate *e4writing* as her reflective journals, one of the course requirements, did not include any negative responses about her *e4writing* experience. However, her interviews that were conducted out of class revealed some negative attitudes about it.

Like the HA group, the LA group displayed similar responses with regard to technical aspects of *e4writing*. Young recommended a technical service such as membership management whereas Lia did not indicate that there was any inconvenience with using *e4writing*.

Table 5.12

Similarities and Differences between Participants in the LA Group

	LA Group	
	Young	Lia
Similarities	Use Strategies	
	Strategies:	Strategy: Failsafe strategy
	<ul style="list-style-type: none"> • Circumlocution • Abandon message 	<ul style="list-style-type: none"> • Switch words • Avoid uncertainty
Differences	<ul style="list-style-type: none"> • Topic avoidance 	
	Less interest in course grades	More interest in course grades
	Suggestions for technical sides for <i>e4writing</i>	No inconvenience of <i>e4writing</i>

Perception Changes in Four Cases

Changes in the students' perceptions over the course were apparently identified through interviews and reflective journals. All four students showed changes between their initial experiences in *e4writing* and their final experiences.

As shown in Figure 5.27, Bo positively responded to *e4writing* at the beginning of the course, showing his excitement with the 'innovative' (his term) assistance. He also had positive attitudes toward the Statistic Log since he expected it might help him not make errors. At the same time, he revealed a 6-to-4 ratio between confidence and anxiety in terms of both grammar and English writing. This may have been due to his knowledge of grammar which he could not use in all writing situations. With this difficulty, he was gradually influenced by negative comments in the error feedback. At the end of the course, he felt depressed with the Statistic Log and revealed negative attitudes toward

e4writing. He was only one who demonstrated the increase of error ratio in the posttest (see Figure 5.26). Given his statement that ‘it was so stressful to focus only on errors’, it was hypothesized that error feedback enabled him to increase his error awareness but simultaneously demotivated him with somewhat low affective filter to practically improve in accuracy in his English writing.

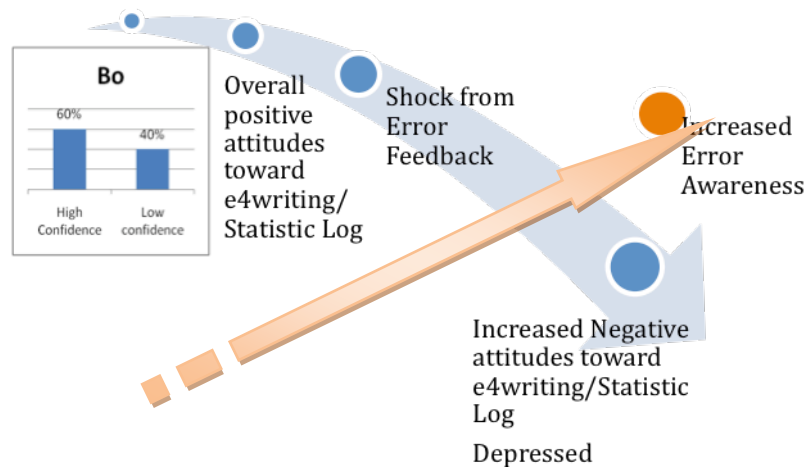


Figure 5.27. Bo's perception changes over the course.

Jin initially presented few concerns about accuracy since her goal was to improve in fluency and vocabulary skills. In particular, she wanted to learn the usage of words in context since she felt that this was difficult. Her initial experience of *e4writing* did not meet her expectations due to the limitations of the asynchronous website, which could not provide a full explanation of a lexical error without face-to-face contact. Nevertheless, she expressed high expectations about *e4writing* for the improvement of accuracy in her writing. She expected to utilize Word Neighbor for the use of words in context and the Board to ask her peers for help or the teacher for vocabulary. Although the inconvenience of Word Neighbor and the Board prevented her from utilizing the features, at the end of

the course, she revealed positive attitudes toward *e4writing* which helped her improve her accuracy. With help of the writing course, she showed some satisfaction in the improvement of vocabulary but negative attitudes about the lack of explanation. Figure 5.28 shows her perception changes over the course.

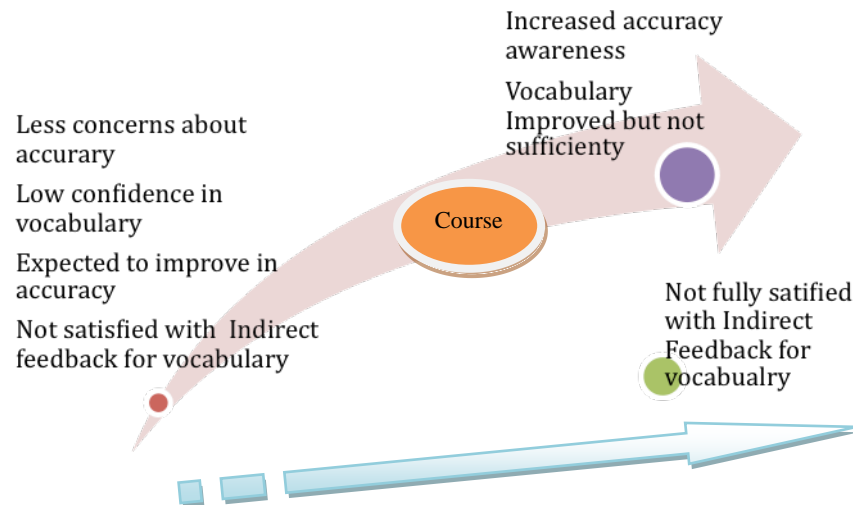


Figure 5.28. Jin's perception changes over the course.

Young was the one who showed low self-esteem in English writing, grammar, and vocabulary at the beginning of the course. Indeed, with less interest in English writing, he had fewer expectations about *e4writing* than the others even though he expressed positive attitudes toward *e4writing* (see Figure 5.25). Additionally, he did not even believe the first holistic evaluation of the essay as it shocked him. He revealed anxiety about the use of *e4writing* for the writing course at the beginning and has not paid attention to the characteristics of *e4writing* in the essays written by Koreans, sharing essays, Practice, Word Neighbor, and Indirect feedback. He utilized only direct feedback and focused on his progress through the error feedback. This limited utilization of *e4writing* might help him lower his anxiety. Through the decrease of error ratio on his

assignments he gradually gained confidence in English writing and exhibited very positive attitudes toward *e4writing* its use as a formative assessment tool. Figure 5.29 displays his perception changes over the course.

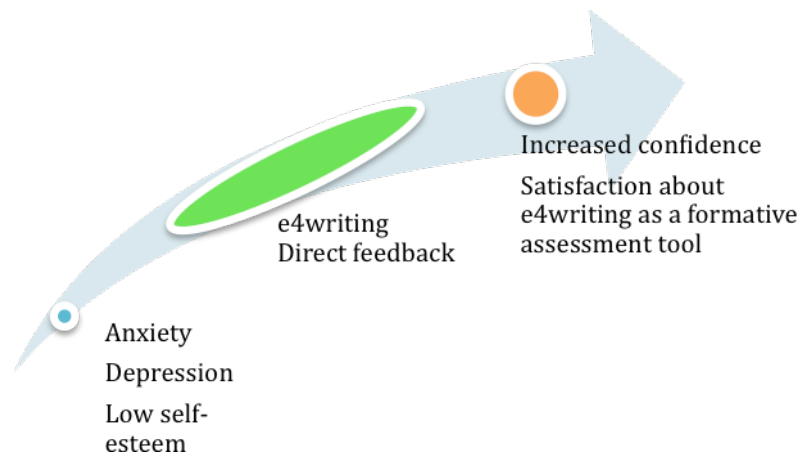


Figure 5.29. Young's perception changes over the course.

Lastly, like Young, Lia showed affective difficulties with English writing, grammar and vocabulary at the beginning. However, she revealed her expectations about *e4writing* hoping that it would help her improve in accuracy. She also initially intended to pay attention to online Essays as she expected the resources to help with her fluency and accuracy. The more she was exposed to TWE essays, the more she was gradually familiar with the format and topics. This increased familiarity might have enabled her to lower her anxiety over English writing. In addition, she also revealed her difficulty with indirect feedback in English due to her unfamiliarity with grammatical explanations (although the explanations were brief) but this difficulty lessened as time passed. Although she did not use the online essays as much as she initially intended, she exhibited confidence in English writing and increased error awareness. The following

figure displays her perception changes over the course (see Figure 5.30). Table 5.13 shows the perception changes in the four participants.

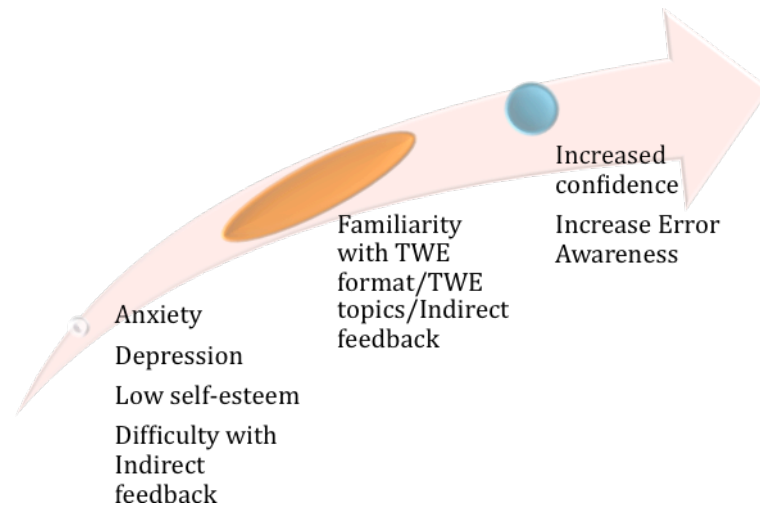


Figure 5.30. Lia's perception changes over the course.

Table 5.13

Perception Changes in the Four Participants (Each new entry is arrowed for readability)

	Pre-perceptions		Post-perceptions
Bo	Overall positive attitudes toward <i>e4writing</i>	→	Increased Negative attitudes toward <i>e4writing</i>
	Positive attitude toward Statistic Log	→	Negative attitude toward Statistic Log
	Overconfident	→	Frustrated
Jin	Less concerns about accuracy	→	Increased accuracy awareness
	Low confident in vocabulary	→	Improved but not sufficient
	Not satisfied with explanation in indirect feedback (for vocabulary)	→	Not fully satisfied with explanation in indirect feedback (for vocabulary)
Young	Low affective aspects	→	Increased confidence
	Anxiety toward <i>e4writing</i>	→	Satisfaction about <i>e4writing</i> as a formative assessment tool
Lia	Low affective aspects	→	Increased confidence
	Unfamiliarity with TWE format/TWE topics/indirect feedback	→	Familiarity with TWE format/TWE topics/indirect feedback
	Intention to pay attention to online Essays	→	Pay attention to only peers' essays

Chapter Summary

This chapter presented the in-depth, case-study findings of four students, specifically focusing on the following: (a) academic profile *and* needs for accuracy in grammar and vocabulary (b) perceptions of *e4writing* for grammar and vocabulary accuracy, (c) performance on writing assignments and tests, and (d) the similarities and differences of the four cases.

The four students had varying educational backgrounds and experiences and showed the differences in confidence, motivation or learning styles. Bo was a confident and visual-sensitive writer; Jin was a highly motivated and verbal-sensitive; Young was an unconfident but challenging writer; and Lia was an unconfident and relationship-oriented writer. In terms of their needs for accuracy, the degree of difficulties with grammar and vocabulary the four student felt differed each other. As revealed in the overall finding, the LA group students felt difficulty with both basic grammar knowledge and essential vocabulary required English writing. Three of four students perceived that affective barriers as one of the main difficulties that prevent them from improving accuracy in English writing.

For the students' perceptions of *e4writing*, all the students welcomed a new writing assistance environment at the beginning of the course. The four students perceived that their awareness of accuracy was increased and reported that direct feedback was the most helpful for improving grammatical accuracy in their English writing. While one of the four students mentioned the negative side of receiving error feedback, two of them revealed that satisfaction from the writing assistance environment and greater confidence in English writing at the end of the course. The results of the

assignments and the tests supported these findings. It also suggested that the supportive features required improvement for the future.

Lastly, while the differences in each case were found in various ways, the similarities of the groups were more found than those of individuals.

CHAPTER 6

DISCUSSION, IMPLICATIONS AND CONCLUSIONS

The previous two chapters presented the findings from a study designed to investigate the students' experiences with a web-based, data-driven writing assistance environment, *e4writing*, for Korean EFL university writers. The 12 Korean EFL university students' overall academic profiles and perceptions of their syntactic and lexical difficulties with English writing and their overall perceptions about and the effects of *e4writing* were discussed in Chapter 4. In Chapter 5, the selected four students' academic profiles and perceptions about their lexico-syntactic difficulties and their perceptions about and the effect of *e4writing* were closely examined.

In this chapter, I will discuss each research question in the three categories: (a) students' academic profiles and needs analysis (b) perceptions of *e4writing* and (c) assignments and test findings, as I did in Chapter 4 and 5. In the following sections I present (a) the pedagogical and pragmatic implications, (b) recommendations for further research, and (c) conclusions of this study.

Discussion Regarding Students' Academic Profiles and Needs Analysis

Discussion of Research Question 1: Student Academic Profiles

RQ 1. What were the "academic profiles" of the Korean university EFL students, and did these profiles have anything in common?

As described in Chapter 3, 12 Korean EFL students participated in this study, ages 22 to 32. They included three male and nine female students enrolled in the Teaching Methods for English Composition course in spring 2009. All the students were from the College of Education but majored in different subjects: Education, English

Education, Japanese Education, History Education, and Early Childhood Education. All the students double majored in English Education except those who only majored in English Education. The students were juniors and seniors, except for one sophomore. The writing course was provided for students who double majored in English Education and who transferred from other departments or other schools to the Department of English Education. Therefore, the students had a variety of educational backgrounds and experiences. As the students did not have much experience with English writing, and in particular academic formal writing, most of them reported that they had difficulties with overall English writing, fluency, and accuracy. Despite such difficulties, only some of the students were greatly anxious, overly reserved, or unmotivated. Other students were confident and motivated, even though they knew they had difficulties.

Based on their academic profiles, it was possible to classify each of the 12 students into one of four groups: the Confident Group, the Unconfident Group, the Instrumentally Motivated Group, and the Indifferent Group. Some students who had studied English abroad in countries such as the U.S. and Canada where English was spoken as a native language showed more confidence in English and English writing than the others. Confidence and motivation were characteristic of the four students in the case studies. In general, the more experience learning English they had, the more positive their attitudes toward English writing. Previous negative experiences in English learning and prior low scores in English affected their self-esteem and caused them to feel anxious about English writing.

Discussion of Research Question 2: English Proficiency

RQ2. How did the Korean university EFL students perform on the pre-writing test?

Through the pre-writing test with a TWE topic conducted in the second week of the writing course, the Korean EFL students demonstrated two different accuracy levels in English writing in terms of accuracy, fluency and the TWE scores: the high and low accuracy levels. Seven students were in the HA group and five were in the LA group. The overall English proficiency of the students is lower than the national average of TWE scores from tests taken by Koreans. Compared to the average TWE score of Korean test takers, 3.6 on a scale of 6 (ETS, 2004), the mean of the 12 students was lower. The mean of the HA group (3.4) was quite close to the Korean's national TWE average, but that of the LA group (2.9) was lower than the Koreans' national average.

Discussion of Research Question 3: Initial Grammar Difficulties

RQ3. What did Korean EFL university students view as their grammar difficulties with English writing?

Reid (1997) stated that a good command of grammar helps language learners deliver their ideas effectively. In this sense, the students felt that they did not have a good command of grammar. The LA group especially felt that they lacked knowledge of grammar. As Beardsmore (1982) noted, many of the difficulties ESL/EFL learners have with grammar are due to the interference of habits from the L1. In this study, the students also experienced grammar difficulties. Moreover, it was found that the LA group depended on their L1 (Korean) more frequently than those in the HA group. The findings supported the argument Chan (2004) presented that language transfer is even more

evident among lower proficiency learners. In addition, some students revealed that it was difficult to apply their knowledge of grammar into writing tasks. This was because they learned English by focusing on accumulating discrete knowledge of grammar.

From the case studies, it was found that their grammar difficulties (e.g., the lack of knowledge of grammar, ungrammatical sentence structures derived from L1 interference, and failure to apply grammar knowledge into writing tasks) often caused the students to have anxiety, depression, frustration, or low confidence. Particularly, the LA group felt grammar was more difficult than did the HA group and regarded these difficulties as the biggest barrier to their English writing.

Discussion of Research Question 4: Initial Vocabulary Difficulties

RQ4. What did Korean EFL university students view as their vocabulary difficulties with English writing?

All 12 Korean EFL students in this study said that they had difficulty with vocabulary, whereas most of the students in the HA group felt they had less difficulty with grammar and showed confidence in grammar. This finding was consistent with what previous research has found. In Soh (1998), Korean EFL college students felt that they had more vocabulary difficulties (64.8%) than grammatical difficulties (48.6%). The students in this study felt that vocabulary was difficult and revealed that they tended to rely on their L1 to retrieve words. However, there were differences between two groups. As Liu, Sung, and Chien (1998) found, the LA group students experienced L1 interference more so than the HA group. In addition, while the LA group felt that a lack of vocabulary was a problem, the HA group students felt lexical choice was difficult.

In the current study, these findings in the two groups, HA and LA, were consistent with the findings in the case studies. The lower the accuracy of the learners, the more they relied on the L1. The LA students also depended on translating their L1 to the L2 due to their lack of vocabulary. However, one participant in the HA group (Jin) felt that lexical choice was difficult although she also relied on L1 for finding words.

Discussion Regarding Perceptions of *e4writing*

Discussion of Research Question 5: Early (second week) Perceptions of *e4writing*

*RQ5. What were Korean university EFL students' early perceptions of *e4writing* as a tool to enhance their grammar and vocabulary accuracy in English writing?*

The most common perspective the Korean EFL students revealed toward *e4writing* was that *e4writing* provided an online corpus for Koreans. The students showed positive responses to the fact that they could share the online essays whenever they wanted and wherever they were. Computer-assisted techniques allow a large amount of learner corpora to be easily handled (Conrad, 2002). Moreover, web-based techniques enable a large amount of data (e.g., online essays) to be more easily distributed and they allow users to access the data anytime and anywhere. As described in Chapter 2, web-based writing assistance programs based on learner corpora have started to appear on the market (Nesselhauf, 2004). Given that the students had rarely used web-based writing assistance programs like *e4writing*, it seems that they welcomed the fact that they could freely use the learner corpora which included resources with error feedback and not merely a bundle of TWE essays.

In addition to sharing essays, the reason why the students had positive responses was that the learner corpus was written by Korean students. According to research in error analysis, the errors L2 writers make differ depending on the characteristics of their first languages. For instance, Rozovskaya and Roth (2010) reveal that different types of errors are made by students of English across nine first language backgrounds. In other words, students with the same language background make common errors. The common errors Korean students made in *e4writing* clearly draw the Korean EFL students' attention. The Korean EFL students expected that the learner corpus could help them avoid making the same errors by focusing on the common grammatical and lexical errors the other Korean students made.

On the other hand, some Korean EFL students revealed their negative perceptions towards *e4writing*. They showed their concerns that the teacher and the native speaker who provided the error feedback might not fully understand what they intended to write. They thought that a few corrected sentences might convey totally different meanings from their intended objectives. In most cases, the sentences included too many errors or unclear/awkward expressions. Indeed, the Korean EFL students usually wrote simple sentences more often than compound and complex sentences. It was not easy for the editors (native speakers and a Korean English teacher) to fully understand their intention.

Discussion of Research Question 6: Later Perceptions of *e4writing* at the End of the Course

RQ6. What were Korean university EFL students' later perceptions of e4writing as a tool to enhance their grammar and vocabulary accuracy in English writing?

As the students' perception of the learner corpus (i.e., online essays in *e4writing*), the most common positive response was that they could share the online essays written by Korean students. The common errors Korean students made in *e4writing* helped the students to lower their affective filter by making them think "everybody makes errors", "she is making the same errors as I am", and so on.

Moreover, the learner corpus could assist them to increase their grammatical awareness in their writing. This finding is consistent with previous research about learner corpora (Allan, 1999; Dagneaus, Denness & Granger, 1998; Tsui, 2004; Tsui, 2005). As in Dagneaus et al. (1998), Korean EFL writers first were exposed to comprehensive examples of authentic learner errors and their frequencies. Next, they could develop their interlanguage through the meaningful use of their linguistic recourses by focusing their attention on linguistic patterns they were not aware of previously. In this sense, as Pica et al. (1989) mentioned that interlanguage development assists learners internalize new forms, the learner corpus helped them to internalize new linguistic features of the target language correctly.

CALL should be designed with the learners in mind to meet their unique needs in ways that traditional teaching does not or cannot (Hegelheimer, 2006; Hegelheimer & Fisher, 2006; Kuo et al, 2001; Kuo et al, 2002; Wible et al., 2001). The error-tagged learner corpus in *e4writing* provided individualized assistance, which the Korean EFL students regarded as the most useful aspect. Through the teacher's direct and indirect error feedback, the error-marked learner corpus in *e4writing* encouraged the Korean EFL to focus their attention on form. Also, as Swain and Lapkin (1995) stated, it helped to raise their awareness of their linguistic deficiencies so they could notice a gap between

what they wanted to say and what they could say. This finding supports the suggestion Dagneaus et al. (1998) made: L2 writers can benefit from error-tagged learner corpora to increase language awareness and to discover areas of persistent difficulty.

The Korean EFL students felt *e4writing* was beneficial for improving grammatical accuracy more so than for vocabulary accuracy. The direct error feedback enabled the students to recognize their grammatical difficulties and helped them learn correct forms through instructions like “correct to X”, “delete X”, or “insert X”. The indirect error feedback helped them understand the errors that occurred by providing a brief explanation such as “Make sure the subject and verb of a sentence agree! The subject and verb of a sentence must agree in number (singular-plural)” for a subject-verb agreement error. The indirect error feedback played a role in offering meaningful and comprehensible input for grammatical errors.

However, whereas the direct error feedback provided correct forms for the grammatical errors, the indirect error feedback could not provide a clear explanation for vocabulary errors. The indirect error feedback gave comments such as: (a) ‘Unclear or awkward! You need to explain this more clearly or choose different words or a different structure’ for an unclear/awkward expression, (b) ‘This expression is often misused by learners of English’ for a common lexical error, or (c) ‘Missing Word(s)’ for a word missing error. It seems that this indirect feedback was not enough to help the Korean EFL students improve their lexical accuracy.

The pop-up comment box generated by *Mark My Words* to provide direct and indirect error feedback has a customizable characteristic that allows the user to insert more explanations for errors. However, it was almost impossible to explain why a given

lexical item was incorrect in a certain context. For instance, for this phrase “When I searched the manual of course through the internet to decide courses I will take,” (from Jin’s assignment 3), the direct feedback gave ‘browsed’ for ‘searched’, but the indirect feedback stated only ‘This expression is often misused by learners of English’. It should be noted that it takes time for a teacher to explain the different meanings of two words through indirect feedback.

Discussion of Research Question 7: Perceptions of the Most Helpful Aspects of *e4writing*

RQ7. Which aspects of e4writing did Korean university EFL students think were the most helpful and why?

As seen above, the Korean EFL students perceived the error-marked online essays and the direct feedback as the most beneficial aspects of *e4writing*. Both helped them increase their grammatical awareness and helped some of them improve their accuracy in their writing assignments and tests.

The third most helpful aspect of *e4writing* was the pop-up windows, which delivered direct and indirect feedback. As mentioned in Chapter 2, giving feedback on students’ written errors is important to maintain the students’ interest and motivation (Ferris & Roberts, 2001). The pop-up windows helped the students to pay attention to linguistic patterns through visual effects. The mouse-over pop-up windows also helped raise the students’ attention. The pop-up windows provided the students with a chance to think about their written errors. These windows also served as an affective buffer against emotional burdens when seeing error feedback.

The fourth and fifth most helpful aspects of *e4writing* were the Grammar Guide and the indirect error feedback. These two aspects helped the students to recognize their

grammatical deficiencies and learn about grammatical patterns in a meaningful way. In addition, these aspects helped some of the students to remember the errors they made in the long term. It is important to provide L2 writers with grammar explanations because students feel safer when they know the grammar rules and have some source to go back to in case of confusion or for future reference (Sysoyev, 1999).

Five of the students thought Statistic Log was one of the most helpful aspects although it was not included in the top five aspects. Its systematic features were welcomed by students who were analytic and visually-oriented.

Discussion of Research Question 8: Perceptions of the Least Helpful Aspects of *e4writing*

RQ8. Which aspects of e4writing did Korean university EFL students think were the least helpful and why?

The Board of *e4writing* was created to help the Korean EFL students provide effective feedback on peers' essays and to communicate with each other when any questions arose. However, it turned out that no one used the Board. From the analysis of the collected data, this was due to situational and cultural reasons. As described in Chapter 3, the writing class required the students to do revision activities with the online essays in groups, pairs, or individually and then to share their feedback. The students did not feel the Board was necessary because they could effectively interact and communicate with peers and with the teacher in the writing class. Additionally, since the students used the class material through an online café offered by the university, they did not feel the Board was necessary. The other reason was that the Korean students'

introverted personality prevented them from using the Board. The students felt more comfortable preserving anonymity when they wrote in *e4writing*.

The students thought the unmarked essays were less helpful than the marked essays for their English writing. The students paid attention to direct assistance rather than trying to discover and correct errors in the unmarked essays by themselves. This finding suggests that the error-marked learner corpus is more helpful for increasing language awareness than the error-unmarked learner corpus.

Practice was one of the least helpful aspects of *e4writing*. The reason for this depended on the groups. The HA group thought that the number of exercises was limited and the 65 exercises under nine grammar categories were not enough. On the other hand, the LA group thought it was difficult to find out and correct errors in the exercises as they did not offer any hints.

In developing *e4writing*, since I realized that the indirect feedback was not sufficient for providing appropriate feedback for vocabulary, I made a decision to utilize Word Neighbor. Mark My Word was provided as an online concordance for lexical assistance and I expected the students would use it for improving their vocabulary accuracy. However, it turned out that most of the students rarely used Word Neighbor, since they thought it did not provide enough instructions. They were unfamiliar with the format of Word Neighbor and felt it was inconvenient to use. It can be concluded that the indirect error feedback and Word Neighbor were less helpful for increasing vocabulary awareness.

Lastly, six of the students regarded the Statistic Log as the least helpful aspect. Most of them did not feel it was necessary to pay attention to the Statistic Log, since they

already recognized errors through the error-marked essays. One of the students (Bo) revealed that the Statistic Log forced him to focus only on errors and demotivated him. Roberts (1999) also found that students feel sometimes frustrated if too many error categories are included in the error logs, if students are not familiar with the terms and rules included in the logs, and if the logs are not sufficiently explained and integrated with other classroom work. Again, as Ferris and Roberts (2001) claimed, teachers need to consider how to provide learners with feedback on their written errors to maintain the students' interest and motivation.

Discussion of Research Question 9: Suggestions for Improving *e4writing*

RQ9. What suggestions did Korean university EFL students have for improving e4writing?

From the case studies, it was found that the LA group used *e4writing* less than the HA group. Although the Korean EFL students selected the Grammar Guide as one of the most helpful aspects of *e4writing*, the students in the LA group used the Grammar Guide less often than those in the HA group. This was due to their low English accuracy; their lack of knowledge of grammar prevented them from fully understanding grammar rules in English. In addition, the students in LA group were not familiar with linguistic jargon (meta-language) in English. Hence, the LA group suggested that *e4writing* should offer the Grammar Guide in Korean, which is more familiar to them. Some students suggested that *e4writing* should provide indirect error feedback in Korean. These findings suggest that less English accuracy the students had, the more they depended on the L1 to understand grammar rules.

The students also made recommendations about the number of exercises in Practice. As mentioned earlier, they felt the number of exercises was limited. In particular, the HA group students asked me to increase the number of exercises. On the contrary, the LA group used Practice less frequently than the HA group. As mentioned earlier, they felt solving the exercises were difficult. These findings also confirmed that the students at the lower accuracy level tended to utilize *e4writing* in a limited way. From the case studies, it was found that both groups required grammar explanations for the exercises in Practice. However, the reason for their request was different. One LA group student (Young) asked for grammar explanations in Korean along with exercises for further understanding. The HA group students asked for exercises to avoid the inconvenience of reviewing the linked marked essays to see the indirect feedback and the Grammar Guide.

From the two suggestions about the Grammar Guide and Practice, it can be concluded that the LA group's narrower use of *e4writing* might be due to their limited English, which prevented them from understanding grammar rules and correcting sentence-level errors.

Lastly, the students evaluated the quality of *e4writing*. They evaluated the technical adequacy and appearance of *e4writing* as lower than the content quality. From the case studies, it was found that male students were more interested in technical sides of *e4writing* than the female students. The male students seemed to be familiar with technology and suggested a visualized layout of *e4writing* and systematic content and user management.

Discussion Regarding Performance on Assignments and Tests

Discussion of Research Question 10: Effects of *e4writing* on Students' Writing

Assignments in Terms of Accuracy.

RQ10. What were the effects of e4writing on the overall accuracy of Korean university EFL students' writing assignments?

Through the eight assignments, all the Korean EFL students demonstrated an improvement in accuracy, except for one student (Hye). In particular, they showed a decrease in their error ratio when I compared assignment one to assignment eight. This result supports their statement that they were concerned about accuracy in their English writing.

In the HA group, two students showed a smaller increase in accuracy (Bo and Sim) between assignments one and eight than the other students in the same group. One student (Hye) showed a decrease in accuracy. As mentioned in Chapter 4, these three were the students who had studied English in the U.S. and Canada. In the beginning of the course, they showed more confidence in English and grammar than the others. They were the students who had the most experience with formal and informal English writing. From Bo's case study, he revealed that he was shocked at the number of errors he made after receiving the first error feedback. It seemed that the error feedback did not positively influence his writing assignments over the course, although he stated that he felt his error awareness increased and the number of his errors decreased. At least for Bo in the HA group, the effect of *e4writing* on his accuracy was not as notable as for the others.

On the other hand, all the students in the LA group showed an increase in accuracy from the first to final assignments. From the case studies, although the LA group students (Young and Lia) revealed anxiety, depression, and low self-esteem in the beginning of the course, they gradually became familiar with *e4writing* error feedback and revealed positive attitudes toward English writing at the end of the course. These slow but positive changes seemed to influence their accuracy.

Discussion of Research Question 11: Effects of *e4writing* on Students' Writing Tests in Terms of Accuracy.

RQ11. What were the effects of e4writing on the overall accuracy of Korean university EFL students' writing tests?

Overall, the Korean EFL students demonstrated the improvement on the posttest compared to the pretest. Of the 12 students, eight students showed the improvement in accuracy. Four students in the HA group (Hyun, Jin, Sim and Yeon) and four students in the LA group (Jung, Young, Lia, and Jee) demonstrated a decrease in their error ratios on the posttest. On the other hand, three students in the HA group (Bo, Min, and Hye) showed a slight increase in their error ratios, and one student in the LA group (Sun) showed a highly increased in error ratio on the posttest.

Through the case studies, it was found that the students who expressed overall positive attitudes toward *e4writing* (Jin, Young, and Lia) showed an improvement in accuracy on the posttest. On the other hand, the students who revealed frustration with negative comments through the error feedback (Bo) showed a decrease in accuracy on the posttest. In particular, given the results Bo demonstrated in his assignments and the tests, the error ratio in the posttest was the highest ratio. As mentioned in Chapter 2,

Truscott (1996) claimed that grammar correction is not only ineffective but also has harmful effects on L2 writing. The findings through the case of Bo in this study support his claim in a way. However, it should be noted that he did not have all negative perceptions of *e4writing*. He viewed *e4writing* positively with respect to accuracy awareness. Moreover, the other three students in the case studies showed support for what the previous research claimed—namely, that both grammar and word correction are important feedback in L2 writing (Bitchener, Young & Cameron, 2005; Chandler, 2003; Conrad & Goldstein, 1999; Ferris 1999; Ferris and Roberts, 2001; Robb, Ross & Shortreed, 1986). In addition, noting that two students in the case studies (Jin and Lia) improved in holistic evaluation (TWE score) on the posttest, the findings in this study support the arguments from Ferris (1999) and Ferris and Roberts (2001). Error feedback is helpful to L2 writers in improving accuracy and overall writing quality.

From the overall results and the case study results regarding the pretest and the posttest, it can be concluded that in terms of accuracy *e4writing* was beneficial to the students in the LA group more so than to those in the HA group.

Implications

Pedagogical Implication

This study was implemented in a writing course. To conduct the study and the writing course, I used *e4writing*. Most of the class materials came from the learner corpus (i.e., online unmarked & marked essays) in *e4writing* including the essays the Korean EFL students wrote. The class activities included finding and correcting errors in the materials through group, pair and individual work. The students submitted their essays as assignments to *e4writing* and received error feedback through *e4writing*, which all

occurred outside of class. As described in Chapter 3, there were also lessons on grammar rules and word choice. The students could review the materials (i.e., online essays) as well as their own essays in *e4writing* outside of class.

Although the use of *e4writing* was used for the course, the writing course also compensated for the inadequacies of *e4writing*. As mentioned earlier, the students felt that indirect error feedback and Word Neighbor were not helpful for improving vocabulary accuracy. Instead, the students revealed that the writing class was more beneficial in helping them to learn about word choice. It turned out that it was easier for me to effectively deliver a full explanation of the different nuances of words in the writing class. This was because the adult Korean EFL students depend on the L1 more for word choice than on grammatical structures. For instance, the students tended to use a word ‘see’ even when they should use ‘observe’ ‘watch’ , or ‘monitor’ since Korean usually use ‘보다 ([boda]) (which means all three). Since I, as a Korean, had knowledge of why the students had difficulty with a given word, my explanations and example sentences for words helped them to clearly understand and learn the different meanings of words. The more students rely on their L1, the more L1 interference occurs in their writing. The offline writing class enabled me to help the Korean EFL students who had difficulties with L2 vocabulary due to the interference from the L1, which the online writing assistance environment, *e4writing*, could not address.

The offline writing class also helped the low accuracy group students who had difficulties with English grammar to understand grammar rules since the writing class was delivered in their L1 (Korean). The indirect error feedback and Grammar Guide *e4writing* provided for helping them gain grammatical understanding were given to them

in English. The low accuracy group students felt that it was difficult to understand the feedback and grammar rules. The offline writing class complemented the limitations of *e4writing*.

These findings suggest that offline courses conducted in the L1 may maximize the effectiveness of a web-based, data-driven writing assistance environment and vice versa, as well as encouraging L2 writers to maintain their interest in their writing. This is because classes can immediately respond to students' needs and easily modify content to meet their needs.

Second, most of the Korean EFL students were satisfied with the feedback on their written errors since it raised their awareness of what they overlooked, did not recognize, or did not have knowledge of. One of the reasons they liked the feedback was that it had been proofread by a Korean English teacher and a native speaker of English. The students who received error feedback from English native speakers sometime felt that the native speakers could not explain 'why it was wrong' or did not understand 'what I wanted to say'. For the writing assignments and tests, as mentioned in Chapter 3, I first corrected the students' errors using *Mark My Words*. I tried to figure out what they wanted to say, and then a native speaker of English who had marked errors for *e4writing* checked what I marked and corrected them again if needed using *Mark My Words*. When we disagreed with the correction, we communicated via email to come to a fair resolution. As I had the same language background with them, had knowledge of English grammar rules, and knew their common error patterns in English writing, I could figure out what they wanted to say more easily than the native speaker when sentences included some lack of clarity, missing word(s), or word order errors. Therefore, it is suggested that co-

proofreading by a Korean English teacher and an English native speaker might provide more benefits to Korean EFL writers, especially at the low and intermediate proficiency levels since the biggest advantage of the L1-speaking teacher over the native-speaking teacher is that the L1-speaking teacher can quickly make a complex grammatical point by comparing it to an L1 structure or by using L1 terms.

Third, the findings from the case studies made me think about how to give error feedback to encourage Korean EFL writers to maintain their interest in improving accuracy in grammar and vocabulary. Negative feedback not only generally helps L2 writers correct or reduce errors and prevent fossilization but it also negatively influences their emotions. Positive feedback on their overall essay, content, logic, or organization could help them maintain low affective filters. In addition, *Mark My Words* enables teachers to insert any comments or pre-written positive comments such as “Good point! You've successfully strengthened your argument with this example” or a smile icon. However, it is suggested that it may be better to provide them with positive feedback on errors than with only negative feedback on them. To do this, teachers need to monitor which frequent errors students make and whether or not the frequent errors are gradually reduced, and then provide positive feedback on the reduction in errors. Obviously, providing direct and indirect feedback is a challenging and time-consuming task for teachers. However, previous research has found that either direct or indirect feedback is not sufficient to eradicate frequent errors. The findings in this study suggest that L2 writers who have difficulties with grammar and vocabulary at the low accuracy level need to be provided with both direct and indirect feedback on their written errors to improve in accuracy. Moreover, it is suggested that L2 writers who have high affective

filters need to be provided with both negative and positive feedback on their written errors by following their progress.

Lastly, it was found that the Korean EFL students had rarely written academic formal essays such as TWE in this study. In addition, the students in the low accuracy group showed low self-esteem and anxiety over English writing. These findings suggest that anxious L2 writers need low stakes writing tasks to improve accuracy instead of high-stakes writing tasks (i.e., TWE). Low stakes writing is usually more informal and tends to be ungraded or carries little weight in grading (Elbow, 1997). Although low-stakes writing is often not graded, or graded minimally, it is most helpful if it is accompanied by some form of feedback (Elbow, 1994). Even though low stakes writing focuses on fluency rather than accuracy, regular low stakes writing can help L2 writers have less anxiety about grades as well as write in English in journals, free writing, mini essays, or peer responses. In addition, L2 writers can improve on high stakes writing through frequent low stakes writing (Elbow, 1997). The Korean EFL students showed an improvement in accuracy in their assignments when assignments one and eight were compared (see Table 4.7). Each assignment was worth five points. The pretest and posttest were both 20 points (See Appendix X). Even though the assignments were graded, the students felt more comfortable doing the assignment outside of class. Moreover, if they had been asked to do more informal writing assignments such as journals, they could have performed better than they did. Hence, L2 writers in the low accuracy level might benefit from low stakes writing if they receive both positive and negative feedback on their written errors.

Practical Implications

From the students' suggestions for improving *e4writing* and the findings of this study, improvements can be made to the Grammar Guide, Word Neighbor, Board, Practice, and technical adequacy and appearance of *e4writing*. As mentioned in Chapter 3, the essential component, *Mark My Words*, which also provided the Grammar Guide and Word Neighbor, was developed in Hong Kong for ESL learners. It turned out that the Korean EFL students in this study did not think that the Grammar Guide and Word Neighbor in English were helpful as much as the other features were to improve their grammatical and lexical accuracy.

First, *e4writing* needs a new Grammar Guide in Korean for Korean EFL students, in particular for students at a low English proficiency level. It is expected that *e4writing* might be more helpful to lower proficiency group students if there was a new grammar guide in Korean. In addition, *Mark My Words* allows one to use Korean for direct and indirect error feedback. However, using Korean prevents a teacher from using the pre-written comments in English so it should be noted that Korean error feedback could be a more time-consuming task.

Next, *e4writing* should provide another concordance for lexical assistance to Korean EFL students. In addition, as an HA group student (Jin) suggested, more resources (such as the materials that were used in the writing class to address confusing words) should be provided.

The findings in this study also suggest that modifying the Board is required. Tag-comments in which anonymity is guaranteed under each essay would more efficiently encourage learners to interact with each other.

Grammar exercises also need to be provided in different formats depending on students' English proficiency. For the lower accuracy group, multiple-choice tests might encourage learners to find incorrect forms, and error-underlined sentences might help them correct errors. For the higher accuracy group, unmarked sentences might help them find and correct grammatical errors, and a paragraph with unmarked sentences might help them to find and correct both grammatical and lexical errors.

Lastly, in terms of technical adequacy and appearance of *e4writing*, the following should be considered: (a) a fast and efficient full text search based on keywords, topic and detailed advanced searching, (b) an archiving facility, (c) further development of facilities such as tracking systems and detailed web statistics, (d) browsing which users can easily see and read the contents of the file, and (e) new attractive design with full navigational functionality.

Recommendations for Further Research

In this study, 12 Korean EFL students' perceptions regarding grammatical and lexical difficulties with English writing and *e4writing* were described. This study may help provide a better understanding of the larger picture of how technology-based assistance writing environment can meet EFL writers' needs. Although this study could contribute to the field of EFL writing, further studies are needed so as to enhance our understanding of the nature of web-based, data-driven environment and writing development. Some possible research agendas are presented below.

First, this study suggests that a combination of offline and online instruction increased the efficiency of English writing instruction. However, this study did not investigate the effectiveness of web-based, data-driven assistance environments alone.

Therefore, a recommendation is to conduct an experimental study with two groups (a group provided with only online assistance and the other group provided with both online assistance and offline instruction) to measure the effectiveness of *e4writing*.

In terms of instruments, the TWE was employed in this study as a learner corpus. However, learner perceptions could vary depending on task difficulty. Thus, further research should examine Korean EFL writers' perceptions about a web-based writing assistance environment with different types of learner corpora that involve a variety of tasks.

Next, the participants of this study were three male and nine female students for the overall study and from the participants, a sample of two males and two females was selected for the case studies. As all of the male students mentioned technical aspects of *e4writing* in this study, future studies may further explore the differences in the two genders. Also, this study focuses on students' perceptions about *e4writing*. Investigating teachers' perceptions about *e4writing* would be additionally informative.

With regard to the study length, this study was conducted over one semester to investigate Korean EFL students' perceptions and *e4writing*. Although this study found out that *e4writing* helped the Korean EFL participants increase their accuracy awareness and improve their English writing accuracy, additional studies in a more prolonged period of time are required to determine the effectiveness of *e4writing*. In particular, further research may discover how effective a web-based, data-driven writing assistance environment is in eradicating the persistent errors students make.

Conclusions

The purpose of this study was to examine students' experiences with a web-based, data-driven writing assistance environment, *e4writing*, for Korean EFL university writers. From the findings in this study, several conclusions can be drawn.

First, the Korean EFL students had the similarities and differences in educational backgrounds and experiences, confidence, motivation, and learning styles.

Second, with regard to the Korean EFL students' needs, the students perceived difficulties with English grammar and vocabulary. The lower English accuracy students had more difficulty with grammar than the higher accuracy students did. The Korean EFL students felt that vocabulary was more difficult than grammar, and the lower accuracy students experienced more affective difficulties than the higher accuracy students did.

Third, the Korean EFL students showed positive perspectives towards *e4writing*. They also positively responded to online essays written by students with the same language background, since they could be more aware of the errors they made. The marked online essays and the direct feedback were evaluated as the most helpful aspects of *e4writing* since they raised the students' awareness of accuracy. The other aspects of *e4writing* (Popup windows, Grammar Guide and Statistic Log) were also helpful to them. They thought the several aspects of *e4writing* were beneficial for improving grammatical accuracy.

Some aspects of *e4writing* were either unnecessary (Board) or insufficient (Practice and Word Neighbor). In particular, while the higher accuracy students utilized all aspects of *e4writing*, the lower accuracy students used the direct feedback more

intensively and felt difficulty utilizing the Grammar Guide and the indirect feedback due to their lack of English proficiency. The writing course made up for the inadequacies and the difficulties caused by some aspects of *e4writing*. Students suggested improving *e4writing* to include a new grammar guide in Korean, a new concordance for improving vocabulary in English writing, and more exercises in Practice.

Lastly, in terms of the effectiveness of *e4writing* on English writing, the Korean EFL students seemed increasingly concerned about accuracy throughout the course. From the pretest to the posttest, the lower-accuracy students received practical benefits from *e4writing* more so than the higher-accuracy students. Therefore, considering this conclusion, along with the fact that the lower-accuracy students focused more on the marked online essays and the direct error feedback than the other aspects, both aspects of *e4writing* directly influenced their improvement of English writing accuracy.

APPENDIX A

Error Categories and Descriptions

Main Categories	Sub Description I	Sub Description II
Careless mistake		
Unclear/awkward		
Capitalization/Spelling	Capitalization	
	Spelling	
Missing word(s)	Missing word(s)	
	Missing Adverb or Connective	
	Missing Complement THAT	
	Missing Determiner	Missing Definite Article
		Missing Indefinite Article
	Missing Noun or Pronoun	
	Relative Clause Structure	
	Missing Preposition	
	Transitive Verb (missing object)	Missing Object
	Missing verb	Missing Verb BE
	Missing Auxiliary Verb	
	Missing Infinitive “to”	
	Intransitive Verb	Missing Intransitive Verb (missing preposition)
	Missing Possessive	
Sentence structure/Punctuation	Agreement of Parallel Structure	
	Comma-Splice/Run-on Sentence	
	Punctuation	
	Mixed Construction	
	Relative Clause Structure	
	Sentence Fragment	
	Question Form	
Redundant	Redundant Word(s)	
	Redundant Verb, Auxiliary, or non-finite	Redundant existential (“there BE”)
		Redundant DO
		Redundant Infinitive TO
		Redundant Empty Verb
	Redundant Adverb	
	Redundant Connective	
	Redundant Noun	
	Redundant Pronoun	

	Redundant Determiner	Redundant THE
		Redundant A/AN
	Redundant THAT	
	Redundant Preposition	Transitive Verb (redundant preposition)
		Redundant Topic reference (Topicalization)
	Redundant Adjective	
Singular-plural	Singular-plural Form	
	Subject-Verb Agreement	
	Agreement Parallel Structures	
Tense	Tense Error	Use Present Tense
		Use Past Tense
		Use Future Tense
		Use Continuous Form
		Use Perfect Form
		Present vs. Past
		Past Perfect vs. Other Tenses
		Simple Past vs. Past Continuous
		Present Continuous vs. Present Simple
Voice (passive/active)		
Wrong form	Wrong Form	
	Idiom Form	
	Adjective Form (-ed vs. -ing)	Adjective-Adverb confusion
		Adjective-Verb Confusion
		Easy-hard-feel-be with dummy subject
	Adverb Form	Comparative-Superlative Form
		Negative Form
	Article Form (a/an)	
	Question Form	
	Noun Form	Possessive Form
		Pronoun Form
	Verb Form	Conditional Form
		Irregular Verb Form

		Empty verb
		Verbs cannot be Subjects
		Form after Verb or Non-finite
		Form after an Auxiliary
		Finite vs. Infinitive Verbs
		Participle Form
		Gerunds vs. Infinitives
		Gerunds vs. Relative Clauses
		Verb vs. Noun Form
Wrong mood		
Word order	Word Order Error	
	Adjective and Adverb Word Order	
	Direct and Indirect Questions	
	Misplaced or Dangling Modifier	
	Possessive Word Order	
	Word Order in Question	
Wrong word(s)	Wrong Word or Expression	
	Wrong Possessive	
	Wrong Article or Other Determiner	
	Wrong Adjective	
	Wrong Adverb or Connective	
	Wrong Auxiliary	
	Wrong Coordination/Subordination	
	Wrong Collocation	
	Wrong Usage	
	Wrong Noun	
	Wrong Preposition	
	Wrong Pronoun	
	Wrong Pronoun Reference (Anaphora)	

	Wrong Relative Pronoun	
	Wrong Verb	
	Are-Have Problem	
	Empty Verb Problem	
	Wrong Yes-No Answer	
	Wrong Question Tag	

APPENDIX B

Writing Assignments Topics

1	Why did you take this writing course?
2	Do you agree or disagree with the following statement? "People should sometimes do thing that they do not enjoy doing." Use specific reasons and examples to support your answer.
3	Some people prefer to eat at food stands or restaurants. Other people prefer to prepare and eat food at home. Which do you prefer? Use specific reasons and examples to support your answer.
4	People have different ways of escaping the stress and difficulties of modern life. Some read; some exercise; others work in their gardens. What do you think are the best ways of reducing stress? Use specific details and examples in your answer.
5	Many students choose to attend schools or universities outside their home countries. Why do some students study abroad? Use specific reasons and details to explain your answer.
6	Many teachers assign homework to students every day. Do you think that daily homework is necessary for students? Use specific reasons and details to support your answer.
7	Some people think that children should begin their formal education at a very early age and should spend most of their time on school studies. Others believe that young children should spend most of their time playing. Compare these two views. Which view do you agree with? Why?
8	Students at universities often have a choice of places to live. They may choose to live in university dormitories, or they may choose to live in apartments in the community. Compare the advantages of living in university housing with the advantages of living in an apartment in the community. Where would you prefer to live? Give reasons for your preference.

APPENDIX C

In-class Writing Activity

Name (이름)	Student ID(학번)	2009 Spring
영어작문지도법		
Teaching Methods for English Composition		

People attend college or university for many different reasons (for example, new experiences, career preparation, increased knowledge). Why do you think people attend college or university? Use specific reasons and examples to support your answer.

APPENDIX D

Final Exam

Name (이름)

Student ID(학번)

2009
Spring

영어작문지도법

Teaching Methods for English Composition

Do you agree or disagree with the following statement: Children should begin learning a foreign language as soon as they start school. Use specific reasons and examples to support your position.

(Take 30 minutes to write your essay.)

APPENDIX E

Course Syllabus

Teaching Methods for English Composition

Section (03): Spring 2009 Wednesday 1:00-3:00 & Friday 3:00-4:00

Department of English Education

Instructor: Misun Lim (misunl74@umd.edu)

Course Description: This course is designed for prospective secondary English teachers to help them develop clear, effective writing. Students will demonstrate their competence through a variety of writing assignments and online writing examples.

Objectives: This course focuses on (but is not limited to) helping students demonstrate competence in writing tasks and learn to revise essays and edit them for grammatical and lexical errors in order to produce extended essays with special emphasis on the organization and development of paragraphs.

Course Materials

Korean EFL writing essay examples (hypertexts) in *e4writing.com*

**** Other materials will be provided in class.**

Assignments

Reflective Journals (in Korean)

The purpose of the reflective journal is to record your thoughts and feelings about your growth and development during the course of the semester. Be as descriptive as possible, including all that you think, (thought), and did, as well as how you feel about what you have accomplished. You need to have a minimum of two journal entries. Each reflective journal must be two pages long, single-spaced and typed.

English Writing Assignment

You will be asked to write weekly assignments. The writing assignments involve producing sentences forming one or two paragraphs. Each topic will be provided in class before the due date.

Grading: All assignments will be given point values. LATE WORK: The highest grade possible for late work is half the credit possible. Assignments are due at the END of the class period (Friday class). After that time, they will be marked late.

Attendance/class participation 10%

Reflective Journals 10%

Writing Assignments 40%

In-class writing activity 15%

Final Exam 25%

Weekly Schedule

Week	Class	Topic	Assignment
1	Mar. 2 – Mar. 6	Introduction to class Why teach writing? What is writing?	
2	Mar. 9 – Mar. 13	Introduction of <i>e4writing</i>	Writing 1
3	Mar. 16 - Mar. 20	In-class writing activity Examine EFL essay samples in <i>e4writing</i>	Writing 2
4	Mar. 23 – Mar. 27	Examine EFL essay samples in <i>e4writing</i>	Reflective Journal 1
5	Mar. 30 – Apr. 3	Examine EFL essay samples in <i>e4writing</i>	
6	Apr. 6 – Apr. 10	Examine EFL essay samples in <i>e4writing</i>	Writing 3
7	Apr. 13 – Apr. 17	Examine EFL essay samples in <i>e4writing</i>	Writing 4
8	Apr. 20 – Apr. 23	Examine EFL essay samples in <i>e4writing</i>	Writing 5
9	Apr. 27 – May 1	Examine EFL essay samples in <i>e4writing</i>	
10	May 4 – May 8	Examine EFL essay samples in <i>e4writing</i>	Writing 6
11	May 11 – May 15	Examine EFL essay samples in <i>e4writing</i>	Writing 7
12	May 18 – May 22	Examine EFL essay samples in <i>e4writing</i>	No class-Campus Festival
13	May 25 – May 29	Examine EFL essay samples in <i>e4writing</i>	
14	Jun. 1 – Jun. 5	Examine EFL essay samples in <i>e4writing</i>	
15	Jun. 8 – Jun. 12	Examine EFL essay samples in <i>e4writing</i>	Reflective Journal 2
16	Jun. 15- Jun. 19	Final Exam	

APPENDIX F

Class Activity: Filling correct grammatical items in blanks

Write the appropriate article (*a, an, the*) in the spaces provided.

Essay ID: 12

Essay Topic: Imagine that you have received some land to use as you wish. How would you use this land? Use specific details to explain your answer.

Having some land to use as I wish would be ____ great fortune. Some people would want to build their own house in ____ land and other people would found ____ park. Among other things, I would prefer to build ____ library.

More than anything else, ____ library is ____ good source of information and especially detailed information about specific fields. I could read ____ variety of books whenever I want, and I could use computer systems if needed. Actually, there is no library near my house, so I sometimes go long distances to find some information which only exists at ____ library. If I build ____ library, it will be helpful to me as well as people who live near ____ site.

In addition, ____ library contributes ____ lot to the environment and mood nearby its location. Usually, in Seoul, there is ____ pleasant area around ____ library. I would also locate ____ small park which surrounds ____ library and together they would be ____ nice place for people. Jung Dok Library which is located in ____ center of Seoul, has ____ nice park nearby and it is regarded as ____ great place for meeting, reading books and doing many cultural activities. I especially like that kind of environment.

To conclude, I would establish ____ library if I received some land to use as I wish. It would give much information to me as well as people who live near ____ site, and ____

library and ____ small park would be ____ refreshing sight to many people. Therefore, I would prefer building ____ library which is indispensable for cultural life.

APPENDIX G

Class Activity: Correcting underlined grammatical errors

Essay ID: 80

Essay Topic: Some students prefer to study alone. Others prefer to study with a group of students. Which do you prefer? Use specific reasons and examples to support your answer.

Each people have their personal study habits. I also have my habits. To study with other students and to study alone both has advantages. However, in my case, I have obtained better result on school exams and another different type of test when I study alone. So I prefer to study alone.

When I was in school, I used to studying with friend, but instead we just played. My friends and I did not work with the group studying. In that study group, our discuss between they and I was only about pop star or top model. After trying to study with group, I thought that it is just a waste of time.

On the other hand, I do not mean that group studying is not an effective method. We can see positive influence of group studying. In a these groups, students share there opnions and exchange informations about the material. Then they can review the material that they had studied. Students who formed a group might have a good result if they have enough passion to study without gossiping.

When I study by myself, I can finally have time when no one interrupts me. In other words, I can study better. This atmosphere helps me to more easily remember new words and makes other educational activities better.

For this reasons, although study with a group is a way to get a good grade on an exam, I think that studying alone have strong points, and it is a far more effective way to success. Studying by myself provides me with a lot of power to imagine and knowledge that can be my real weapon on a test.

APPENDIX H

Class Activity: Correcting underlined word errors

Essay ID: 23

Essay Topic: Is the ability to read and write more important today than in the past? Why or why not? Use specific reasons and examples to support your answer.

As we all know, the world is changing steadily. And the abilities thought important are also changing. One of those abilities is to read and write. I could state several factors which defend the statement the ability to read and write is more important today.

In the past the majority of people did agriculture for their livelihood, which doesn't ask skills to read and write that much. around that time, no other skill is comparable to farming skill in the aspect of practical use. Furthermore generally they learn how to farm well from their parents or relatives etc, in other words, they learn that from teachers' doing. What they should do to study was just to follow and memorize and make themselves to adjust to do that.

However, today is "Information age", which Knowledge and Information are valued more than ever before. Companies compete to get more sharp idea. And most basic information are obtained from printed-paper. Here is a good example. when someone try to cook something new, he/she usually look recipe printed or to manage a new machine such as microwave or washing machine, he/she generally look manual to know how to

make it work. Another good example is just internet. Internet is very common all over the world. We can get **huge** information from web surfing, **also** can send an e-mail to someone you like. But in order to do these, we **should** know how to read and write.

To sum up, in the past the ability to read and write wasn't required that much but these days, almost all **should have to** learn how to read and write basically for live **comfortable**.

APPENDIX I

Class Activity: Correcting sentence-level grammatical errors

Quantifier: MOST

1. Most of Korean students go to a university although they don't want to keep studying. (#103)
2. If people gave thought to the possible negative effects of experience, most people would agree with my opinion. (#10)
3. By this age, most of people are university graduates. (# 104)
4. First of all, usually most of the students in Korea attend college or university to make new experiences. (#102)
5. Thus, young doctors are likely to work in rural areas unlike the reading passage's contention that most doctors do not want to work in rural areas due to their enormous debts. (#3)
6. It is not always that most of the students like to learn all the subjects. (#83)
7. Most of the phenomena are so complicated that people need to use diverse information to analyze them. (#78)
8. We can see most people around us have entered colleges or universities. (#33)
9. To begin with, friends significantly influence young adults because they spend most of their time with their friends. (#53)
10. For example, most of universities in my country have their dormitories within 500 meters from each college and they charge just 10 dollars a month. (#40)
11. In addition, it can be used from time to time unlike most of other fashion items. (#22)

APPENDIX J

Class Activity: Finding and correcting grammar and word errors

Essay Topic: Many teachers assign homework to students every day. Do you think that daily homework is necessary for students? Use specific reasons and details to support your answer.

Essay ID: 172

In school, some teachers assign homeworks to students every day, but daily homeworks are unnecessary. Perhaps, teachers who assign homeworks believe homeworks help to students. However, few students do their homework with true heart. Students always study in school. Almost students go academies after school. They may be tired by works the all day, and want to rest at home. Doing homeworks block their rest. Next day, students study again, but they are tired so sleep in school. This is a vicious circle. Students do their homeworks loosely, because they think their works are very hard, bother and tiresome. Frankly speaking, teachers don't check on student's homeworks. Students may think these are unnecessary more and more. Assigning homeworks are necessary sometimes, but teachers don't assign homeworks everyday. This is not for students!

Essay ID: 176

Nobody wants to do homework every day. It is unnecessary and stressful that doing homework day by bay. Homework is very useful and easy way of improving studying ability of each subject. But, if each teacher assigns homework every day, students would

spend over half of day for doing home work. Students need time for taking a rest at home, watching TV shows, and to talking with their friend.

Doing homework every day is stressful not only students but also teachers. Teachers are very busy for improving teaching skills, revising subject courses, and studying about their major subject. If teachers assign homework every day, they would spend their time to check homework and to input data into computer. Too much Homework has bad effect on students and teachers. I think the best teacher is make students understand about subject contents without doing homework every day.

APPENDIX K

Background Questionnaire

The aim of the background questionnaire is to obtain a better understanding of your background and language/technology experiences.

Please answer the following questions about yourself.

1. Name: _____
2. Gender: Male _____ Female _____
3. Age _____
4. Major _____
5. Minor _____
6. What do you plan to do for a career _____
7. How long have you been studying English? _____ years _____ months
8. What are your highest and lowest English scores in TOEIC?
Highest Score _____ Lowest Score _____
9. Do you like to write English in general?
Very much ☐ Moderate ☐ Not much ☐

What is your main purpose of English writing?

- Assignment ☐ Email ☐ Pen pal ☐
Nonschool journal or diary ☐ Letter or Newspaper ☐
Messenger chatting ☐

Other _____

10. How often do you write in English? (Select one and put a number)

_____ times a day _____ times a week

_____ times a month _____ times a year

11. Do you like to use a computer in general?

Very much ☐ Moderate ☐ Not much ☐

What is your main purpose of using a computer?

Schoolwork ☐ Email ☐ Messenger chatting ☐

Nonschool journal or diary ☐ Internet surfing ☐

Other _____

12. Do you have Internet access at home? Yes ☐ No ☐

13. How long do you use a computer a day? _____ hours a day

14. How long do you use the Internet a day? _____ hours a day

15. Which do you prefer to use for English composition?

Traditional way with pen and paper ☐

Computer (e.g., Word processor) ☐

기초 설문조사

이 기초 설문조사는 언어 및 컴퓨터와 관련된 귀하의 경험에 대한 것입니다.

다음 질문에 대해 답변하여 주세요.

1. 닉네임_____
2. 성: 남_____ 여_____
3. 연령 _____
4. 전공 _____
5. 부전공_____
6. 앞으로 어떤 직업에 종사하고 싶나요? _____
7. 영어를 얼마 동안 공부하였나요? _____년 _____개월
8. TOEIC에서 가장 높은 점수와 가장 낮은 점수는 무엇인가요?
가장 높은 점수_____ 가장 낮은 점수_____
9. 일반적으로 영어 쓰기를 좋아하나요?

매우 그렇다 ☐ 그저그렇다 ☐ 전혀 아니다 ☐

영어쓰기의 목적은 무엇인가요?

과제 ☐ 이메일 ☐ 펜팔 ☐

일기혹은 일지 ☐ 편지 혹은 신문 ☐

메신저 대화 ☐

기타 _____

10. 영어 쓰기를 얼마나 자주 하나요? (한가지만 선택하여 횟수를 쓰세요)

하루에 _____ 번 일주일에 _____ 번

한달에 _____ 번 일년에 _____ 번

11. 일반적으로 컴퓨터 사용을 좋아하나요?

매우 그렇다 ☐ 그저그렇다 ☐ 전혀 아니다 ☐

컴퓨터 사용 목적은 무엇인가요?

학업 ☐ 이메일 ☐ 메신저 대화 ☐

일기 혹은 일지 ☐ 인터넷 서핑 ☐

기타 _____

12. 집에서 인터넷 사용이 가능하나요? 네 ☐ 아니요 ☐

13. 하루에 컴퓨터 사용 시간은 얼마나 되나요? 하루에 _____ 시간

14. 하루에 인터넷 사용 시간은 얼마나 되나요? 하루에 _____ 시간

15. 영어 작문을 위해 어떤 방식을 선호하나요?

펜과 종이를 이용한 전통적인 방법 ☐

컴퓨터 (워드 프로세서) ☐

APPENDIX L

Student Perception Questionnaire

The purpose of the student perception questionnaire is to collect information about your experiences with the learner texts and *e4writing* and its effects on the accuracy of your writing.

Please answer the following questions about your experiences of using the online learner texts in *e4writing*. Circle the numbers that correspond to your responses.

1=strongly disagree (SD) 2=disagree 3=not sure 4=agree 5=strongly agree (SA)

#	Statement	SD <-----> SA
1	Overall, the learner texts in <i>e4writing</i> were helpful for improving my in-class work.	1 2 3 4 5
2	The error-marked essays (i.e., essays clearly showing the errors) were helpful for improving my English writing.	1 2 3 4 5
3	The unmarked essays were helpful for improving my English writing.	1 2 3 4 5
4	I paid attention to grammatical errors in reading the error-marked essays.	1 2 3 4 5
5	In general, I paid more attention to the error-marked essays than unmarked essays.	1 2 3 4 5
6	I paid attention to word errors in reading the error-marked essays.	1 2 3 4 5
7	After using the error-marked essays, I paid more careful attention to grammatical accuracy in my English writing than before.	1 2 3 4 5
8	After using the error marked essays, I paid more careful attention to vocabulary accuracy in my English writing than before.	1 2 3 4 5

9	The error-marked essays helped me increase accuracy in grammar in my English writing.	1	2	3	4	5
10	The error-marked essays helped me increase accuracy in vocabulary in my English writing.	1	2	3	4	5
11	The pop-up comments in the error-marked essays were helpful for figuring out what errors occurred.	1	2	3	4	5
12	The online concordancer in the pop-up comments in the error-marked-up essays helped me increase accuracy in vocabulary in my English writing.	1	2	3	4	5
13	The online grammar guide in the pop-up comments in the error-marked-up essays helped me increase accuracy in grammar in my English writing.	1	2	3	4	5
14	Overall, the learner texts were very useful resources for my English writing.	1	2	3	4	5

What else would you like to say about the online learner texts?

Please answer the following questions about your experiences with *e4writing*. Circle the numbers that correspond to your responses. (This questionnaire was designed based on the user-perceived web-quality instrument in Aladwani and Palvia, 2002.)

1=strongly disagree (SD) 2=disagree 3=not sure 4=agree 5=strongly agree (SA)

	Statement	SD <-----> SA
1	<i>e4writing</i> looks easy to navigate through.	1 2 3 4 5
2	<i>e4writing</i> has adequate search facilities.	1 2 3 4 5
3	<i>e4writing</i> is always up and available.	1 2 3 4 5
4	<i>e4writing</i> has valid links (hyperlinks).	1 2 3 4 5
5	<i>e4writing</i> can be personalized or customized to meet your needs.	1 2 3 4 5
6	<i>e4writing</i> has many interactive features (e.g., comment and Q&A board).	1 2 3 4 5
7	<i>e4writing</i> is easy to access.	1 2 3 4 5
8	The contents of <i>e4writing</i> are useful for general English writing.	1 2 3 4 5
9	The contents of <i>e4writing</i> are helpful for improving my in-class work.	1 2 3 4 5
10	The contents of <i>e4writing</i> are helpful to improve my accuracy in English writing.	1 2 3 4 5
11	I felt comfortable using the resources in <i>e4writing</i> .	1 2 3 4 5
12	The content of <i>e4writing</i> is complete	1 2 3 4 5
13	<i>e4writing</i> looks attractive	1 2 3 4 5
14	<i>e4writing</i> looks organized	1 2 3 4 5
15	<i>e4writing</i> uses fonts properly	1 2 3 4 5
16	I will probably continue using <i>e4writing</i> for improving accuracy in my English writing after this class is finished.	1 2 3 4 5
17	I would recommend <i>e4writing</i> to other students who want to improve their accuracy in English writing.	1 2 3 4 5

The following are aspects of *e4writing*:

	Aspects of <i>e4writing</i>
1	Korean EFL unmarked essays in <i>e4writing</i>
2	Korean EFL error-marked essays in <i>e4writing</i>
3	Pop-up error feedback in error-marked essays in <i>e4writing</i>
4	Teacher's direct error feedback of the correction form
5	Teacher's indirect error feedback
6	Online concordancer as a vocabulary reference in error-marked essays in <i>e4writing</i>
7	Online grammar guide in error-marked essays in <i>e4writing</i>
8	Grammar practice using the Korean EFL essays in <i>e4writing</i>
9	Board for comments and Q&A in <i>e4writing</i>
10	Statistic logs as an error summary in error-marked essays in <i>e4writing</i>
11	Others

Which **five aspects** of *e4writing* do you think the most helpful (write the number) and why?

Which **five aspects** of *e4writing* do you think the least helpful (write the number) and why?

What else would you like to say about *e4writing*?

THANK YOU SO MUCH FOR YOUR COOPERATION

후연구 인식 설문조사

본 후연구 인식 설문조사는 *e4writing*을 사용해 본 귀하의 경험에 대한 정보를 얻고자 실시하는 조사입니다. 다음은 *e4writing*의 온라인 에세이를 이용해 본 귀하의 경험에 대한 질문입니다. 해당하는 번호를 선택해 주세요.

1=매우 그렇지 않다(SD) 2=그렇지 않다 3=잘 모르겠다 4=그렇다 5=매우 그렇다 (SA)

	제시문	SD <-----> SA
1	전반적으로, <i>e4writing</i> 의 온라인 에세이는 이 수업에서 나의 영어작문 실력 향상에 도움이 되었다.	1 2 3 4 5
2	오류 표시된 에세이가 내 영어 쓰기 향상에 도움이 되었다.	1 2 3 4 5
3	오류 표시 되지 않은 에세이가 내 영어 쓰기 향상에 도움이 되었다.	1 2 3 4 5
4	일반적으로, 나는 오류 표시 되지 않은 에세이 보다 오류 표시된 에세이에 더 많은 관심을 가졌다.	1 2 3 4 5
5	나는 오류 표시된 에세이를 읽을때 문법 오류에 집중하였다.	1 2 3 4 5
6	오류 표시된 에세이를 읽을때 단어 오류에 집중하였다.	1 2 3 4 5
7	오류 표시된 에세이 사용후, 영어쓰기시 문법적 정확성에 더 주의하게 되었다.	1 2 3 4 5
8	오류 표시된 에세이 사용후, 영어쓰기시 어휘적 정확성에 더 주의하게 되었다.	1 2 3 4 5
9	오류 표시된 에세이는 영어 쓰기에서 문법적 정확성을 높이는데 도움이 되었다.	1 2 3 4 5
10	오류 표시된 에세이는 영어 쓰기에서 어휘적 정확성을 높이는데 도움이 되었다.	1 2 3 4 5
11	오류 표시된 에세이에 있는 해설창은 오류를 이해하는데 도움이 되었다.	1 2 3 4 5
12	오류 표시된 에세이에서 온라인 용어색인은 영어쓰기에서 어휘의 정확성을 높이는데 도움이 되었다.	1 2 3 4 5
13	오류 표시된 에세이에서 온라인 문법 가이드는 영어 쓰기에서 문법적 정확성을 높이는데 도움이 되었다.	1 2 3 4 5
14	전반적으로, 온라인 에세이는 영어쓰기의 좋은 자료가 되었다.	1 2 3 4 5

온라인 에세이에 대해 다른 코멘트가 있다면 무엇인가요?

다음은 *e4writing* 에대한 귀하의 경험에 대한 질문입니다. 해당하는 번호를 선택해 주세요. (이 설문지는 Adadwani and Palvai (2002)의 사용자 인식 웹-질적 도구를 기초로 만들어졌습니다.)

1=매우 그렇지 않다(SD) 2=그렇지 않다 3=잘 모르겠다 4=그렇다 5=매우 그렇다 (SA)

	제시문	SD <-----> SA				
1	<i>e4writing</i> 사이트 내에서 검색이 용이하다	1	2	3	4	5
2	<i>e4writing</i> 사이트는 적절한 서치 기능이 있다.	1	2	3	4	5
3	<i>e4writing</i> 는 항상 사용이 가능하다.	1	2	3	4	5
4	<i>e4writing</i> 의 링크는 연결이 잘되어 있다.	1	2	3	4	5
5	<i>e4writing</i> 는 개인의 요구에 맞도록 되어있다.	1	2	3	4	5
6	<i>e4writing</i> 는 여러 상호작용적인 기능이 있다 (댓글 및 문답 게시판) .	1	2	3	4	5
7	<i>e4writing</i> 사이트는 접속이 용이하다.	1	2	3	4	5
8	<i>e4writing</i> 의 내용은 전반적인 나의 영어쓰기에 유용했다.	1	2	3	4	5
9	<i>e4writing</i> 의 내용은 이 수업의 영어쓰기 향상에 도움이 되었다.	1	2	3	4	5
10	<i>e4writing</i> 의 내용은 영어쓰기의 정확성을 높이는데 도움이 되었다.	1	2	3	4	5
11	<i>e4writing</i> 의 자료를 이용하는것에 불편함이 없었다.	1	2	3	4	5
12	<i>e4writing</i> 의 내용은 완성되어 있다.	1	2	3	4	5
13	<i>e4writing</i> 는 보기에 좋다.	1	2	3	4	5
14	<i>e4writing</i> 는 체계적이다.	1	2	3	4	5
15	<i>e4writing</i> 적절한 폰트를 이용하고 있다.	1	2	3	4	5
16	이 수업이 끝나도 영어 쓰기의 정확성 향상을 위해 <i>e4writing</i> 을 계속 사용할 수도 있다.	1	2	3	4	5
17	영어 쓰기의 정확성을 향상하고자 하는 다른 학생들에게 <i>e4writing</i> 을 추천할 수도 있다.	1	2	3	4	5

다음은 *e4writing* 의 특징입니다.

	<i>e4writing</i> 의 특징
1	<i>e4writing</i> 에서 오류표시 되지 않은 한국 EFL 에세이
2	<i>e4writing</i> 에서 오류 표시된 한국 EFL 에세이
3	<i>e4writing</i> 에서 오류 표시된 에세이의 피드백 팝업창
4	교사의 직접 오류 피드백
5	교사의 간접 오류 피드백
6	<i>e4writing</i> 의 오류표시된 에세이에서 어휘 참조로서의 온라인 용어색인 (Word Neighbor)
7	<i>e4writing</i> 의 오류표시된 에세이에서 링크된 온라인 문법 가이드
8	<i>e4writing</i> 의 한국 EFL 에세이를 이용한 문법 연습 (메뉴에서 practice 섹션)
9	<i>e4writing</i> 의 댓글과 문답을 위한 게시판
10	<i>e4writing</i> 의 오류표시된 에세이에서 오류 요약으로서의 통계 테이블 (Log)
11	기타

e4writing 특징 중 자신의 영어쓰기에 가장 도움이 되었던 다섯가지 든다면 무엇인가요? (번호를 쓰시오) 그 이유는 무엇인가요?

e4writing 특징 중 자신의 영어쓰기에 가장 도움이 되지 않았던 다섯가지 든다면 무엇인가요? (번호를 쓰시오) 그 이유는 무엇인가요?

*e4writing*에 대해 다른 코멘트가 있다면 무엇인가요?

협조해 주셔서 감사합니다.

APPENDIX M

Semi-structured Interview Questions

I. First Interview

1. Do you like writing in English?
2. How would you describe your English writing?
3. How important do you think writing is in your present major?
4. What do you think are the difficulties you often encounter in your English writing in terms of grammar and vocabulary? How do you solve those difficulties?
5. Why was your most recent essay easy or difficult to write?
6. What concerns did you have when you wrote your most recent essay? What issues were you dealing with (e.g., structure, topic, format, etc.)?
7. What do you like the most about the online learner texts? What do you like least?
8. Do you think the online learner texts will help you improve your English writing accuracy? If so, in what ways?
9. Do you think *e4writing* will help you improve your English writing in general or accuracy? If so, in what ways?
10. Is there anything else you would like to tell me about your experience and difficulties you have had in English writing?
11. What else would you like to say about the online learner texts and *e4writing*?

II. Second Interview

1. What aspects of the online learner texts were the most helpful for improving your English writing and why?
2. What aspects of the online learner texts were the least helpful for improving your English writing and why?
3. Do you think the online learner texts helped you improve your English writing accuracy? If so, in what ways?
4. Were there any aspects of the online learner texts you did not like? If so, what were they and why?
5. Did you use the online concordancer and the online grammar guide in the pop-up comments in the error-marked-up essays for your learning? If so, how useful were they for you?
6. Do you feel that your writing in English has changed in any way after using the learner texts? If so, in what ways?
7. Which aspect was the most helpful in *e4writing*? Which aspect was the least helpful?
8. What aspects of *e4writing* helped you improve your English writing?
9. Were there any aspects of *e4writing* you did not like? If so, what were they and why?
10. Do you feel that your writing in English has changed in any way after using *e4writing*? If so, in what ways?
11. Do you feel that your attitude toward web-based writing environments has changed in any way? If so, in what ways?
12. What would you like to suggest for improving *e4writing*?

I. 첫번째 인터뷰

1. 영어로 쓰는것을 좋아하나요?
2. 당신의 영어쓰기에 대해 설명해 주세요.
3. 현재 전공에서 영어쓰기는 얼마나 중요한가요?
4. 영어 쓰기를 할때 문법과 어휘에 대해 어려움이 종종 있나요? 그 어려움을 어떻게 해결하나요?
5. 가장 최근에 작성한 에세이는 어려웠나요? 쉬웠나요?
6. 가장 최근에 에세이를 작성할때 어떤점에 관심을 두었나요? (예, 문법 구조, 토픽, 형식 등)
7. 온라인 에세이에 관해 가장 좋은 점은 무엇인가요? 가장 안 좋은 점은 무엇인가요?
8. 온라인 에세이가 영어쓰기의 정확성 향상에 도움이 될 것이라고 생각하나요? 만약 그렇다면 어떤 방식으로 도움이 될까요?
9. *e4writing* 가 영어쓰기의 일반적인 향상, 혹은 영어쓰기의 정확성 향상에 도움이 될 것이라고 생각하나요? 만약 그렇다면 어떤 방식으로 도움이 될까요?
10. 영어쓰기할때의 경험이나 어려운점에 대해 더 말해 줄 수 있는것이 있나요?
11. 온라인 에세이와 *e4writing* 에 대해 더 말하고 싶은 것은 없나요?

II. 두번째 인터뷰

1. 온라인 에세이 특징중에 영어 작문에 가장 도움이 된것은 어떤것이며 그 이유는 무엇인가요?
2. 온라인 에세이 특징중에 영어 작문에 가장 도움이 안된것은 어떤것이며 그 이유는 무엇인가요?
3. 온라인 에세이가 영어쓰기의 정확성 향상에 도움이 되었다고 생각하나요? 만약 그렇다면 어떤 방식으로 도움이 됐나요?
4. 온라인 에세이에서 마음에 들지 않은 부분이 있었나요? 있다면, 어떤것이, 왜 마음에 들지 않았나요?
5. 오류 표시 에세이에서 용어 색인과 온라인 문법 가이드를 사용하였나요? 만약 그렇다면용어 색인과 온라인 문법 가이드가 도움이 되었나요?
6. 온라인 에세이를 사용한 후 영어쓰기에 어떤 변화가 있다고 느끼나요? 만약 그렇다면 어떤면에서 변화가 있었나요?
7. *e4writing*에서 가장 도움이 되었던것은 무엇이었나요? 가장 도움이 안되었던 것은 무엇이었나요?
8. *e4writing*의 어떤점이 영어쓰기 향상에 도움이 되었나요?
9. *e4writing*에서 마음에 들지 않는 부분이 있었나요? 있다면, 어떤것이, 왜 마음에 들지 않았나요?
10. *e4writing* 사용한 후 영어쓰기에 어떤 변화가 있다고 느끼나요? 만약 그렇다면 어떤면에서 변화가 있었나요?
11. 웹기반 쓰기 환경에 대한 당신의 태도가 변했다고 느끼나요? 만약 그렇다면 어떤면에서 변화가 있었나요?
12. 온라인 에세이나*e4writing* 개선을 위해 제안할 것이 있다면 무엇인가요?

APPENDIX N

Test of Written English (TWE) Scoring Guide

Readers will assign scores based on the following scoring guide. Though examinees are asked to write on a specific topic, parts of the topic may be treated by implication. Readers should focus on what the examinee does well.

Scores

- 6 Demonstrates clear competence in writing on both the rhetorical and syntactic levels, though it may have occasional errors.
A paper in this category
- effectively addresses the writing task
 - is well organized and well developed
 - uses clearly appropriate details to support a thesis or illustrate ideas
 - displays consistent facility in the use of language
 - demonstrates syntactic variety and appropriate word choice
- 5 Demonstrates competence in writing on both the rhetorical and syntactic levels, though it will probably have occasional errors.
A paper in this category
- may address some parts of the task more effectively than others
 - is generally well organized and developed
 - uses details to support a thesis or illustrate an idea
 - displays facility in the use of language
 - demonstrates some syntactic variety and range of vocabulary
- 4 Demonstrates minimal competence in writing on both the rhetorical and syntactic levels.
A paper in this category
- addresses the writing topic adequately but may slight parts of the task
 - is adequately organized and developed
 - uses some details to support a thesis or illustrate an idea
 - demonstrates adequate but possibly inconsistent facility with syntax and usage
 - may contain some errors that occasionally obscure meaning

- 3 Demonstrates some developing competence in writing, but it remains flawed on either the rhetorical or syntactic level, or both.
A paper in this category may reveal one or more of the following weaknesses:
- inadequate organization or development
 - inappropriate or insufficient details to support or illustrate generalizations
 - a noticeably inappropriate choice of words or word forms
 - an accumulation of errors in sentence structure and/or usage
- 2 Suggests incompetence in writing.
A paper in this category is seriously flawed by one or more of the following weaknesses:
- serious disorganization or underdevelopment
 - little or no detail, or irrelevant specifics
 - serious and frequent errors in sentence structure or usage
 - serious problems with focus
- 1 Demonstrates incompetence in writing.
A paper in this category
- may be incoherent
 - may be undeveloped
 - may contain severe and persistent writing errors

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